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Public Rights in West Virginia Watercourses: A Unique Legacy of Virginia Common Lands and the Jus Publicum of the English Crown

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George: Public Rights in West Virginia Watercourses: A Unique Legacy of V

PUBLIC RIGHTS IN WEST VIRGINIA WATERCOURSES:

A UNIQUE LEGACY OF VIRGINIA COMMON LANDS AND THE *JUS PUBLICUM* OF THE ENGLISH CROWN

*Larry W. George**

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I. INTRODUCTION

The State of West Virginia and the Commonwealth of Virginia share a common heritage which includes the common law¹ and the preeminent role of watercourses in the development of western or "Trans-Allegheny" Virginia — now the State of West Virginia — during the 18th and 19th centuries. The historical use of watercourses for transportation, waterpower, fishing, fowling, and hunting resulted in an evolution in common and statutory law which have compelling contemporary relevance. Today, the manifestations of this heritage are the "*jus publicum*" (public uses protected by the sovereign) and the reservation of certain "rivers and creeks" as "common lands" (proprietary interests) which the new state inherited upon the partition of Virginia in 1863. These ancient common lands represent an exceptional heritage, since Virginia alone among the original thirteen states reserved public ownership of watercourses by statute.²

The applicable body of law is a somewhat anachronistic amalgam of the English common law of *jus publicum* and private riparian rights,³ colonial and state land grant procedures, and early Virginia statutes reserving certain watercourses as "common lands." This body of state law governs public and private rights subject only to two doctrines of federal constitutional law: (1) the federal navigational servitude imposed by the Commerce Clause of the Federal Constitution⁴ and (2) the

¹ The common law of West Virginia is English common law as modified by the enactments of the Virginia General Assembly (1776-1863) and the West Virginia Legislature. See W. VA. CONST. art. VIII, §13; ch. 5, 9 Va. Hening's Stat. 126 (1776); *Avery v. Beale*, 80 S.E.2d 584, 588 (Va. 1954); *Commonwealth v. City of Newport News*, 164 S.E. 689, 694-95 (Va. 1932).

² See generally 1 HENRY PHILIP FARNHAM, *THE LAW OF WATERS AND WATER RIGHTS* 256-58 (1904) [hereinafter FARNHAM].

³ "Riparian rights" generally means all the rights and interests of owners of lands directly abutting a watercourse relating to the watercourse and its waters. See 1 *WATERS AND WATER RIGHTS* § 6.01(a) (Robert E. Beck ed., *The Michie Co. 1991 & Supp. 1998*) (1967). See also *Thurston v. City of Portsmouth*, 140 S.E.2d 678, 680 (Va. 1965) (explaining that riparian rights are (1) to remain and enjoy the natural advantages of proximity to the water, (2) access to the water including a right-of-way to the navigable part, (3) to build a pier or wharf to the navigable part, (4) to make use of alluvium or the accretions to the bank, and (5) to make a reasonable consumptive or non-consumptive use of the flowing water) (citing *Taylor v. Commonwealth*, 47 S.E. 875, 880-81 (Va. 1904)).

⁴ See U.S. CONST. art. I, § 8, cl. 3. Control of navigation and commerce on navigable waters is vested in Congress. See *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377 (1940); *United States v. Holt State Bank*, 270 U.S. 49 (1925); *The Daniel Ball*, 77 U.S. 557 (1870); *The Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443 (1851); 4 *WATERS AND WATER RIGHTS*, *supra* note 3 at § 30.05.

creation of West Virginia in 1863.

The State's waters comprise approximately nine thousand (9,000) distinct streams and thirty-four thousand stream miles (34,000 mi.). These resources are of great social and economic significance for municipal and industrial water supply, commercial navigation, natural heritage conservation, and recreational opportunities such as fishing, boating, whitewater rafting and waterfowl hunting. In contrast to these public uses, most watercourses are bounded by private riparian lands whose owners have varying expectations of privacy, dominion, and, particularly along smaller streams, the power to restrict public access as a trespass.⁵

Today, the common lands (a.k.a. as "submerged" or "subaqueous lands") are vested by statute in the West Virginia Public Land Corporation which estimates that they exceed one hundred thousand acres (100,000 ac.).⁶ The sovereign powers of *jus publicum* (protected public uses) are vested in the West Virginia Legislature as successor to the English Crown.⁷ These public resources have received scant attention from the judicial or legislative branches for over a century, and the Public Land Corporation has managed them in relative obscurity. However, the growing popularity and economic importance of outdoor recreation and increasing concern for public access issues could easily result in greater attention by state government. In the transactional context, conveyances and leases of riparian lands and/or mineral rights are commonly consummated without considering the potential property interests of the State. Such public interests should be considered by attorneys rendering title opinions and closing real estate transactions involving riparian lands.

The principal factors determining public and private rights in watercourses are as follows:

1. Physical Characteristics: Whether the watercourse is classified as navigable-in-fact (non-tidal), floatable, or non-floatable at common law.
2. Origin of Title to Riparian Lands: Whether the title to the riparian lands originates from a Colonial patent or a Northern Neck Proprietary grant during the colonial period, a Virginia Land Office patent (1780-1863), a West Virginia land grant (1863 to 1884), or a deed from a West Virginia school land commissioner (1865 to 1912).
3. Eastern or Western Waters: Whether riparian lands lie upon the "eastern waters" which drain to the Chesapeake Bay (Potomac River watershed in the Eastern Panhandle and Potts Creek watershed in Monroe County) or the "western waters" which drain to the Ohio River. Historically, the Allegheny Front divided the Commonwealth of Virginia, and now the State of West Virginia, between the eastern and western waters.

⁵ In West Virginia, the criminal trespass statute includes crossing the "boundary of any land which is formed by water" if posted. See W. VA. CODE §§ 61-3B-1(6) and 61-3B-3(a) (1997).

⁶ See *infra* text accompanying notes 364-67.

⁷ See *Commonwealth v. City of Newport News*, 164 S.E. 689, 692, 696-98 (Va. 1932); *Crenshaw v. Slate River Co.*, 27 Va. (6 Rand.) 245 (1828).

4. 1780 & 1802 Common Lands Acts: Whether a watercourse comprises common lands by reason that it is a “river or creek” excepted by statute from Virginia patents and West Virginia land grants of riparian lands and reserved in public ownership. Those eastern waters which had been “used as common” and remained ungranted in May, 1780 were reserved. But on the western waters, all the “rivers and creeks” which remained ungranted on January 15, 1802, were reserved without qualification.

II. THE COMMON LAW

A. *Historical Context: Land Policy and Non-tidal Navigation During the Colonial Period*

The State’s proprietary and sovereign interests have their foundation in the westward expansion of the Virginia colony in the early 1700’s and the Virginia government’s policy goals of improving navigation, developing water-power and protecting “fishing, fowling and hunting” for the public. The 17th century found settlement limited to the “tidewater”—those lands encompassed by the Chesapeake Bay and its tidal tributaries. Until 1700, there was little significant settlement west of the “fall line” which divided the tidewater from the freshwater uplands of the Piedmont.⁸ Transportation was provided by large ocean vessels which navigated the Chesapeake Bay and the four major tidal rivers (James, Rappahannock, York and Potomac) as far upstream as the fall line to reach central anchorages which were connected with the individual plantation landings on lesser tidal waters by means of locally built “lighters,” or small boats.⁹ With the beginning of the 18th century, public rights in the non-tidal rivers were largely undefined, as both the reported English cases and public use, even in Virginia, were limited to tidal waters.

The English Crown was originally vested with title to all lands and waters in the Virginia Colony as a personal dominion.¹⁰ Prior to independence, private titles to lands within contemporary West Virginia originated with either colonial “patents” issued by the Colonial Council of Virginia (the colony’s executive body) or “grants” issued by the Northern Neck Proprietary, which operated independ-

⁸ See VIRGINIUS DABNEY, *VIRGINIA: THE NEW DOMINION* 73 (1971).

⁹ See ROBERT BEVERLEY, *THE HISTORY AND PRESENT STATE OF VIRGINIA* 120 (Louis B. Wright ed., University of North Carolina Press 1974) (1705); 1 PHILIP ALEXANDER BRUCE, *ECONOMIC HISTORY OF VIRGINIA IN THE SEVENTEENTH CENTURY* 103-05 (1895); 2 PHILIP ALEXANDER BRUCE, *ECONOMIC HISTORY OF VIRGINIA IN THE SEVENTEENTH CENTURY* 524-25 (1896).

¹⁰ See 1 FREDERICK POLLOCK & FREDERIC WILLIAM MAITLAND, *THE HISTORY OF ENGLISH LAW* 232-40 (2d ed. 1911).

ently of the colonial government.¹¹ The “waste and unappropriated lands” were those available for patent and not otherwise reserved by the Colonial Council. Within what is now West Virginia, colonial patents were most commonly issued pursuant to the Land Act of 1705,¹² but patents were also issued by the Colonial Governor pursuant to other authority conferred by the Assembly or Colonial Council, e.g., as compensation for military service. The Northern Neck Proprietary,¹³ created by Royal Charter in 1668, encompassed over five million acres bounded by the Fairfax Line¹⁴ and the Potomac and Rappahannock Rivers and included most of the Eastern Panhandle of West Virginia.¹⁵ The Proprietary, which was based on the English manorial system,¹⁶ was vested with quasi-sovereign powers and was not subject to colonial land laws.¹⁷

Outside of the Eastern Panhandle, title to the great majority of lands within West Virginia originates with patents issued after independence by the Virginia Land Office.¹⁸ However, Colonial patents for significant tracts of riparian lands were issued in the Ohio, Kanawha, Monongalia, and central Greenbrier River Val-

¹¹ See DAPHNE S. GENTRY, LIBRARY BOARD OF VIRGINIA, VIRGINIA LAND OFFICE INVENTORY, at vii-xxi (undated); FAIRFAX HARRISON, VIRGINIA LAND GRANTS 11-17, 54-58 (1925) (cited with approval in *Kraft v. Burr*, 476 S.E.2d 715 (Va. 1996)).

¹² See ch. 21, 3 Va. Hening's Stat. 304 (1705).

¹³ The Proprietary is commonly known by the misnomer “Fairfax Grant” in recognition of Thomas Lord Fairfax (1693-1781), Sixth Baron of Cameron, who as the last Proprietor, from 1719 until his death in 1781, was the most active in the leasing, granting and development of its lands within West Virginia. The 1668 Royal Charter was actually issued to seven individuals, including Fairfax's grandfather, Lord Culpepper, who eventually acquired the full interest and which was subsequently devised to Lord Fairfax.

¹⁴ The Fairfax Line begins at the “Fairfax Stone” (marking the head spring of the Potomac River) in Tucker County and runs 76.5 miles southeast to the Blue Ridge (head spring of the Rappahannock River). The Fairfax Line forms the northern boundary of Rockingham County, Virginia, with Shenandoah County, Virginia, and Hardy County, West Virginia. See *infra* note 15.

¹⁵ The Northern Neck Proprietary included the contemporary West Virginia counties of Jefferson, Berkeley, Morgan, Hampshire, Mineral, and parts of Hardy, Grant, and Tucker. This area was subject to a boundary dispute between the Proprietary and the colonial government, concerning whether the Northern Neck's western boundary extended to the head spring of the Potomac River or only to the Blue Ridge and involving approximately 3.8 million acres. In 1733, the British Privy Council fixed the head springs of the North Branch of the Potomac River and the Rappahannock River as defining the western limits of the Proprietary. In 1736, the “Fairfax Line” was surveyed between these two points to fix the boundary which was confirmed by the Privy Council in 1745. See Act of Aug. 10, 1736, ch. 13, 4 Va. Hening's Stat. 514; Stanley Phillips Smith, *The Northern Neck's Role in American Legal History*, 77 VA. MAG. OF HIST. & BIOGRAPHY 277, 277-80 (1969); Elizabeth Cometti, *Concerning the First Survey of the Northern Neck*, 2 W. VA. HIST. 52, 52-64 (1940).

¹⁶ See *infra* text accompanying notes 341-43.

¹⁷ See *Fairfax's Devisee v. Hunter's Lessee*, 11 U.S. 603, 605-06, 615-16, 618-19 (1812); *Hunter v. Fairfax's Devisee*, 15 Va. (1 Munf.) 218 (1810).

¹⁸ See Land Office Act, ch. 13, 10 Va. Hening's Stat. 50 (1779). See generally EDGAR B. SIMS, SIM'S INDEX TO LAND GRANTS IN WEST VIRGINIA (1952).

leys and the Eastern Panhandle south of the Fairfax Line.¹⁹ In the Eastern Panhandle, north of the Fairfax line, titles to riparian lands are dominated by land titles from the colonial period, principally Northern Neck grants²⁰, with relatively modest tracts of ungranted lands remaining after independence for disposition by the Virginia Land Office.²¹

B. *Non-tidal Watercourses Conveyed to Riparian Patentees and Grantees*

Virginia case law provides that, prior to independence, both colonial patents and Northern Neck grants conveyed title to non-tidal watercourses included within the described tract unless expressly excluded by the description.²² Virginia decisional authority and historical literature provide no examples of such exceptions in colonial patents. Only *tidal* waters and shores were reserved at common law without express reservation.²³ For colonial patents, the 1705 Land Act²⁴ re-

¹⁹ OTIS K. RICE, *THE ALLEGHENY FRONTIER, WEST VIRGINIA BEGINNINGS, 1730-1830*, 34-35 (1970); see generally SIMS, *supra* note 18.

²⁰ Colonial patents were also issued by the Colonial Council within the Northern Neck until the 1733 British Privy Council order resolving the disputed Proprietary boundary and the subsequent survey of the Fairfax Line. See *supra* note 15. As part of the boundary settlement, the Privy Council order and subsequent enactment of the General Assembly recognized and confirmed all Colonial patents issued within the Proprietary through 1745. See Act of Oct. 22, 1748, ch. 55, 6 Va. Hening's Stat. 198; *Hite v. Fairfax*, 8 Va. (4 Call) 42 (1786). Colonial patents within the Proprietary were issued along Back, Opequon, Patterson and Tuscarora creeks, and the Little and Great Cacapon and South Branch Potomac rivers. See RICE, *supra* note 19, at 21-22; Smith, *supra* note 15.

²¹ See Charles Morrison, *Early Fairfax Land Grants and Leases Along the South Branch of the Potomac*, 38 W. VA. HIST. 2, 2-11 (1976); see generally SIMS, *supra* note 18. In 1785, following the death of Lord Fairfax, the remaining ungranted lands of the Northern Neck Proprietary were appropriated by enactment of the Virginia General Assembly and assigned to the Virginia Land Office for disposition with other waste and unappropriated lands. See Act of Oct. 10, 1785, ch. 47, 12 Va. Hening's Stat. 111, 112-13; *Fairfax's Devisee*, 11 U.S. at 623-24; HARRISON, *supra* note 11, at 119-21.

²² See *Boerner v. McCallister*, 89 S.E.2d 23, 26-27 (Va. 1955) (holding that Colonial patents issued between 1749 and 1751 conveyed to grantee the bed of navigable Jackson River in Allegheny County, Virginia); *Stokes & Smith v. Upper Appomattox Co.*, 30 Va. (3 Leigh) 318, 337-40 (1831) (holding that Colonial patents issued under 1705 Land Act conveyed the bed of a non-tidal navigable stream to grantees); *Crenshaw v. Slate River Co.*, 27 Va. (6 Rand.) 245 (1828) (holding that 1726 Colonial patent conveyed bed of a "private, nonnavigable stream," i.e., non-tidal); *Mead v. Haynes*, 24 Va. (3 Rand.) 33, 35 (1824) (finding that "[b]y the common law, every river, so far as it ebbs and flows, belonged to the Crown; but rivers, not navigable, were the property of the proprietors of the lands on both sides of the river"; *Martin v. Beverley*, 9 Va. (5 Call) 444, 447 (1805) (recognizing that "the fact is, and is so admitted by many of our laws, that the beds of navigable rivers are granted to individuals" in referring to the non-tidal North Fork of Rappahannock River); 1981-82 Va. Op. Att'y Gen. 242 (1982). See also *James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp.*, 122 S.E. 344 (Va. 1924); *Mairs v. Gallahue*, 52 Va. (9 Gratt.) 94, 96-97 (1852) (holding that bed of Big Sandy Creek in Jackson County (now West Virginia) belongs to riparian landowner); *Home v. Richards*, 8 Va. (4 Call) 441 (1798); *Curle v. Sweney*, 2 Va. Colonial Dec. B117 (1740). But see *Old Dominion Iron & Nail Works v. Chesapeake & Ohio Ry. Co.*, 81 S.E. 108 (Va. 1914) (holding that Colonial patent did not convey bed of non-tidal James River based on its use as a public highway long before the Revolution), criticized in *James River & Kanawha Power*, 122 S.E. at 345, 348.

²³ See *Miller v. Commonwealth*, 166 S.E. 557 (Va. 1932); *Taylor v. Commonwealth*, 47 S.E. 875

quired standard language which conveyed "all...rivers, waters, watercourses..." to the patentee and, with only ministerial revisions, language to this effect was included in all colonial patents.²⁵ Northern Neck grants did not include such specific terms of conveyance and, as a result of the manorial system, the Proprietary was more likely to refrain from conveyances of larger watercourses by excluding them from the manorial lots subject to grant.²⁶

In Kentucky, which was formed from Virginia in 1792 and adopted its common law,²⁷ the Virginia rule has been adopted.²⁸ While there are no West Virginia cases adjudicating streambed title under a colonial patent or Northern Neck grant, in *Barre v. Fleming*²⁹ the Court did acknowledge that the "common-law rule of England and for a time in this country ... was that in all such (non-tidal) rivers the riparian proprietor owned the soil to the center of the stream."³⁰ In the West Virginia decision *Gaston v. Mace*,³¹ the Court observed in 1889 that the "rule of the common-law, that riparian proprietors own to the thread of fresh water rivers, has been adopted in this and many other states of the Union."³² Patents or grants adjoining exclusively one side of the watercourse conveyed to the grantee the bank and a "moiety" (one-half) of the bed, measured to the centerline of the stream.³³

(Va. 1904); *supra* note 22.

²⁴ See ch. 21, 3 Va. Hening's Stat. 304 (1705).

²⁵ See *id.* at 308-09; HARRISON, *supra* note 11, at 17-51. See also *Kraft v. Burr*, 476 S.E.2d 715 (Va. 1996).

²⁶ See ALVIN T. EMBREY, THE STATE COMMISSION ON CONSERVATION AND DEVELOPMENT OF THE STATE OF VIRGINIA, WATERS OF THE STATE 94-128 (1931)[hereinafter EMBREY] (cited as an authoritative treatise in *Miller*, 166 S.E. at 563); HARRISON, *supra* note 11, at 90-95; *infra* notes 342-43.

²⁷ See KY. CONST. § 233; *Campbell v. W.M. Ritter Lumber Co.*, 131 S.W. 20 (Ky. 1910); *Ray v. Sweeney*, 77 Ky. (14 Bush) 1 (1878).

²⁸ See *Commonwealth v. Henderson County*, 371 S.W.2d 27 (Ky. 1963) (holding that riparian patentee takes title to "thread" of Ohio River); *Sutton v. Terrett*, 192 S.W.2d 382 (Ky. 1946) (holding that riparian landowner takes title to "thread" of Mississippi River); *Natcher v. City of Bowling Green*, 95 S.W.2d 255 (Ky. 1936); *Berry v. Snyder*, 66 Ky. (3 Bush) 266, 277-79 (1867) (holding that Kentucky adopts the common law rule recognized in Virginia and patentee under 1787 Virginia patent takes title to "thread" of Ohio River).

²⁹ 1 S.E. 731 (W. Va. 1887).

³⁰ *Id.* at 736.

³¹ 10 S.E. 60 (W. Va. 1889).

³² *Gaston v. Mace*, 10 S.E. 60, 65 (W. Va. 1889) (quoting *Brown v. Chadbourne*, 31 Me. 9 (1849)). But see *infra* text accompanying notes 122-37. In *Campbell, Brown & Co. v. Elkins*, the West Virginia Supreme Court held that the common law evolved at independence and that all navigable rivers were thereafter excepted from Virginia patents. See 93 S.E.2d 248 (W. Va. 1956).

³³ See *Ewell v. Lambert*, 13 S.E.2d 333 (Va. 1941); *Carter v. C. & O. Ry. Co.*, 26 W. Va. 644 (1885); *Camden v. Creel*, 4 W. Va. 365 (1870).

C. *Sovereign Protection of Certain Public Uses as Jus Publicum*

In 1606, the Crown issued instructions that the new Virginia colony be governed according to the equity and common law of England.³⁴ In England, most watercourses utilized for navigation were tidal waters, and the reported English cases were limited to such waters, a fact which contributed to the occasional but mistaken notion in early American case law that only tidal waters were navigable at common law.³⁵ The tidal versus non-tidal debate was further exacerbated by the question of whether the ownership of non-tidal beds, if they be navigable-in-fact, had also been reserved to the Crown from colonial patents for riparian lands.³⁶ But instead, the true English rule provided that all tidal waters were navigable-at-law, even if they were not navigable-in-fact, e.g., tidal marshes, and that non-tidal waters which were actually navigable-in-fact were also navigable-at-law.³⁷

Even during the colonial era, Virginia acknowledged the true English rule. In 1772, the General Assembly enacted "An act for opening and extending the navigation of the river Potowmack from Fort Cumberland to tide water,"³⁸ and similar legislation was also enacted for the James River "from Westham to the tide water."³⁹ In his celebrated 1784 report on Virginia geography, *Notes on the State of Virginia*, Thomas Jefferson identified several non-tidal rivers as being "navigable" including the Cheat, "Great Kanhaway," "Great Sandy," Greenbrier, "Guiandot," "Little Kanhaway," and Monongahela Rivers of western Virginia.⁴⁰ By 1805, the Virginia Supreme Court acknowledged in dictum in *Martin v. Beverley*⁴¹ that the North Fork of the Rappahannock, an entirely non-tidal river, was a navigable watercourse. With the exception of some vacillation in the late 18th century, Virginia always followed the true English rule that non-tidal rivers may also be navigable-at-law. In its first case on riparian rights in 1883, *Town of Ravenswood v. Fleming*,⁴² the West Virginia Supreme Court also adopted the true English rule in find-

³⁴ See Ancient Charter of April 10, 1606, 1 Va. Hening's Stat. 57, 67-68.

³⁵ See *Gaston*, 10 S.E. at 62-63; *Berry v. Snyder*, 66 Ky. (3 Bush) 266, 273 (1867); 1 FARNHAM, *supra* note 2, at 117-18.

³⁶ See EMBREY, *supra* note 26, at 145-61; 1 FARNHAM, *supra* note 2, at 117.

³⁷ See 1 FARNHAM, *supra* note 2, at 112-17.

³⁸ Act of Feb. 12, 1772, ch. 31, 8 Va. Hening's Stat. 570.

³⁹ Act of Feb. 11, 1772, ch. 30, 8 Va. Hening's Stat. 564.

⁴⁰ See THOMAS JEFFERSON, NOTES ON THE STATE OF VIRGINIA 22-32 (Paul Leicester Ford ed., Historical Printing Club 1894) (1784).

⁴¹ 9 Va. (5 Call) 444 (1805). In an 1831 decision, the Virginia Supreme Court considered whether a mill dam owner could divert water from the non-tidal portion of the Appomatox River, which it described as a navigable stream. See *Stokes & Smith v. Upper Appomatox Co.*, 30 Va. (3 Leigh) 318, 332-33, 337-40 (1831).

⁴² 22 W. Va. 52 (1883).

ing the Ohio River a navigable stream.⁴³ The Court acknowledged that differences in geography and the minor significance of non-tidal navigation in England had resulted in earlier American case law to the contrary.⁴⁴ The West Virginia Supreme Court was influenced by the concurrent evolution of federal law to include non-tidal waters as navigable for purposes of admiralty jurisdiction of the federal courts and federal regulation of commerce under the Commerce Clause.⁴⁵

The true English rule is set forth in the 1671 treatise of English Lord Chief Justice Matthew Hale, *De Juris Maris et Brachiorum Ejusdem* (Concerning the Law of the Sea and its Arms),⁴⁶ first published in 1787, which has been cited by the Supreme Courts of both Virginia and West Virginia as the most authoritative source of the English common law concerning watercourses and navigation.⁴⁷ Lord Hale reported that the soil beneath tidal waters, and the seashores and banks thereof, were vested in the Crown and subsequent English and Virginia cases support this finding.⁴⁸ However, the soil beneath the non-tidal rivers was vested in adjacent riparian landowners if the land had been granted.⁴⁹ In distinguishing the rights of the public in such non-tidal rivers, Lord Hale reported:

There be some streams or rivers that are private not only in propriety of ownership, but also in use, as little streams and rivers that are not a common passage for the King's people. Again, there be other rivers, as well fresh as salt, that are of common or publick use for carriage of boats and lighters. And these, whether they are fresh or salt, whether they flow and reflow or not, are prima facie public juris, common highways for man or goods, or both, from one inland town to another and as well where they are become to be of private propriety as in what parts are the King's property, are publick rivers juris publici. And therefore all nuisances and

⁴³ Town of Ravenswood v. Fleming, 22 W. Va. 52, 55-6 (1883).

⁴⁴ See *id.*

⁴⁵ See Barre v. Fleming, 1 S.E. 731, 735-38 (W. Va. 1887); 1 WATERS AND WATER RIGHTS, *supra* note 3, at 26-28.

⁴⁶ See Lord Mathew Hale, *De Jure Maris et Brachiorum ejusdem*, in 1 HARGRAVE'S TRACTS 5 (Francis Hargrave ed., 1787).

⁴⁷ See, e.g., Commonwealth v. Morgan, 303 S.E.2d 899, 902 (Va. 1983) (citing Crenshaw v. Slate River Co., 27 Va. (6 Rand.) 245, 260 (1828)); *Gaston*, 10 S.E. at 64. See also Berry v. Snyder, 66 Ky. (3 Bush) 266, 275-77 (1867) (citing with approval Hale's treatise as source of Virginia common law).

⁴⁸ See Commonwealth v. Garner, 44 Va. (3 Gratt.) 655 (1846); *Mead*, 24 Va. (3 Rand.) at 35; *Malcomson v. O'Dea*, 11 Eng. Rep. 1155, 1165 (1863); *Gann v. Free Fishers of Whitesable*, 11 Eng. Rep. 1305, 1312 (1865); *Carter v. Murcot*, 98 Eng. Rep. 127 (1768); Hale, *supra* note 46, at 11-17.

⁴⁹ See *Garner*, 44 Va. (3 Gratt.) at 655; *Mead*, 24 Va. (3 Rand.) at 35; *Home*, 8 Va. (4 Call) at 441.

impediments of passage of boats and vessels, though in the private soil of any person, may be punished by indictment, and removed;....⁵⁰

Lord Hale based this *juris publici* right upon historical use and cited the great rivers of England, the Wey, Severn, and Thames, as examples of non-tidal rivers which were navigable-in-fact and subject to this right of public passage over the private submerged lands.

Relying upon established principals of Roman Law, *De Jure Maris* recognized three different interests in the sea and inland watercourses of England and its colonies: (1) the *jus regim*, the power of the Crown as sovereign to manage these resources for the public health and welfare, (2) the *jus publicum*, the rights of the general public in such watercourses, and (3) the *jus privatim*, the law governing the relationship between private parties.⁵¹ The *jus privatum* represented the Crown's proprietary interests in the beds and shores of tidal and non-tidal waters.⁵² The *jus publicum* manifested the Crown's governmental powers over these shores and beds, even after conveyance to private landowners, to protect the public rights of navigation, fishing and other uses thereon.⁵³ The proprietary interests of *jus privatum* could be alienated by the Crown in a conveyance to a private riparian but the *jus publicum* preserved the public rights of navigation and fishing and could not be alienated. The Crown could include the submerged tidal lands and the shores in grants of waterfront lands or otherwise alienate such interests subject to the *jus publicum*.⁵⁴ However, such grants of tidal shores (below the ordinary high-water mark) and submerged lands were rare in Virginia.⁵⁵

III. STATUTORY REVISIONS IN THE COMMON LAW

A. 1779 Land Office Act and Evolving State Policy Regarding Non-tidal Watercourses

Following independence, the General Assembly established the Virginia

⁵⁰ See Hale, *supra* note 46, at 8-9.

⁵¹ See Lynda L. Butler, *The Commons Concept: An Historical Concept With Modern Relevance*, 23 WM. & MARY L. REV. 835, 861-62 (1982).

⁵² See *Shively v. Bowlby*, 152 U.S. 1, 13 (1893).

⁵³ See *id.*

⁵⁴ See *Shively*, 152 U.S. at 13; *McCreedy v. Virginia*, 94 U.S. 391, 394 (1876); *Morgan*, 303 S.E.2d at 901; Hale, *supra* note 46, at 11-17.

⁵⁵ Grantees, generally limited to a fixed maximum acreage, had an economic incentive to select arable lands with access to navigable waters and fishing but excluding submerged lands and wetlands. See Margit Livingston, *Ownership of Virginia's Submerged Lands: Commonwealth v. Morgan and Beyond*, 4 VA. J. OF NATURAL RESOURCES LAW 325, 336-39, 348 (1985).

Land Office to market the state's remaining "waste and unappropriated lands," which were principally situated in western Virginia since most lands in the tidewater and piedmont regions had been granted during the colonial period.⁵⁶ But the 1779 Land Office Act⁵⁷ did not restrain patents of watercourses by the Registrar of the Land Office and in effect continued the colonial practice of conveying the beds and banks to the riparian patentee.⁵⁸ The General Assembly responded by enacting a series of statutes between 1780 and 1819 which revised the common law to reserve public ownership and protect public rights in non-tidal watercourses such as fishing, fowling, hunting and use as a "common."⁵⁹ By 1800, the improvement of navigation in Trans-Allegheny Virginia with engineered works, and the rights to construct such works in the beds and banks also became a principal concern.⁶⁰

B. *Eastern and Western Waters*

In 1780, the General Assembly enacted legislation which reserved public ownership of the ungranted "rivers and creeks" previously "used as common" in eastern Virginia and, in 1802, in an expansive departure from its earlier action, declared that the same rivers and creeks of the western waters were all to be common lands. These enactments provide no guidance concerning the division of Virginia between eastern and western waters, but dicta in some Virginia cases and one West Virginia case suggest the Blue Ridge Mountains as the dividing line. The question is important, since the Blue Ridge would place contemporary West Virginia exclusively within the western waters.

In *Waters of the State*, Judge Embrey provides an exhaustive technical analysis of the 1769 surveys for the creation of Botetourt County from Augusta County, then comprising most of contemporary West Virginia. The survey line was to run west "as far as the western waters" and determines the Allegheny Front as the true division.⁶¹ A 1982 formal opinion of the Virginia Attorney General, issued at the request of the Virginia Marine Resources Commission to assist in identifying

⁵⁶ See *French v. Bankhead*, 52 Va. (11 Gratt.) 136, 167 (1854); *M'Clung v. Hughes*, 26 Va. (5 Rand.) 453, 490 (1827); *supra* note 18.

⁵⁷ Ch. 13, 10 Va. Henning's Stat. 50 (1779).

⁵⁸ During the colonial period the Colonial Council exercised its discretion to refuse applications to patent lands considered as common. See *infra* note 76.

⁵⁹ See EMBREY, *supra* note 26, at 169-73.

⁶⁰ See VA. GENERAL ASSEMBLY, J. OF THE VA. SENATE 1801-02 at 7-8; 10 (Dec. 7, 1801, letter from Governor James Monroe to the Virginia General Assembly discussing the poor condition of public roads and the importance of the improvement of navigable rivers for commerce in western Virginia); RICE, *supra* note 19, at 339-40 (riparian landowners protest construction of Monongahela River navigation dams, circa 1816-26, as impairing their property rights); P.M. Rice, *Internal Improvements in Virginia, 1775-1860* at 33-36, 63-71 (1948) (unpublished Ph.D. thesis, University of North Carolina); *infra* note 272.

⁶¹ See EMBREY, *supra* note 26, at 290-301.

the common lands, adopted the conclusions of Judge Embrey.⁶² Both legislative and common historical usage also support the Allegheny Front as manifested in numerous turnpike and Land Office statutes⁶³ and surveys by the Virginia Board of Public Works.⁶⁴ In 1784, shortly after the Revolutionary War, George Washington conducted his famous field survey to locate a canal or turnpike between the navigable streams of the eastern and western waters of Virginia.⁶⁵ In his diaries, General Washington identifies the Potomac River as comprising the eastern waters and the Monongahela, Cheat, and Tygart Valley Rivers as being western waters.⁶⁶

Accordingly, for the purposes of the 1780 and 1802 Acts, "eastern waters" are those watercourses which drain to the Chesapeake Bay, and "western waters" are those which drain to Ohio River. The Allegheny Front divided the Commonwealth of Virginia, and now the State of West Virginia, between the eastern and western waters.⁶⁷

C. *Certain "Rivers and Creeks" on the Eastern Waters "Used As Common" Reserved by 1780 Common Lands Act*

During its 1780 session, the shortcomings of the 1779 Land Office Act became a subject of debate in the General Assembly, and the House of Delegates adopted the following resolution which was communicated to the Senate:

WHEREAS, the unappropriated land on the Bay sea shores and Point Comfort, hath hitherto been considered as common, and numbers of poor people availing themselves thereof, have drawn considerable support for their families;

⁶² See 1981-82 Va. Op. Att'y Gen. 242 (1982).

⁶³ See, e.g., Act of Oct. 5, 1780, ch. 20, 10 Va. Hening's Stat. 367 (authorizing the county court of Greenbrier County to have a wagon road built from Lewisburg, which lies west of the Allegheny Front, to the "eastern waters" at either "the Warm Springs, or ... the mouth of the Cow Pasture river" which lie west of the Blue Ridge but east of the Allegheny Front); *Barre v. Fleming*, 1 S.E. 731, 733 (W. Va. 1887) (the 1780 Act "had no reference to lands west of the Alleghenies"). See also *United States v. Appalachian Elec. Power Co.*, 23 F. Supp. 83, 101 (W.D. Va. 1938), rev'd on other grounds, 311 U.S. 377 (1940) (holding that the New River is within the western waters of Virginia and was subject to 1802 Act for purposes of Land Office patents); EMBREY, *supra* note 26, at 279-90.

⁶⁴ See, e.g., 1 ANN. REP. OF THE VA. BOARD OF PUB. WORKS 10 app. (1817) (proposed turnpike from head of navigation of James River at Dunlop Creek (Covington, Virginia) to the Greenbrier River would provide "connection between the eastern and western waters").

⁶⁵ See 4 THE DIARIES OF GEORGE WASHINGTON, 1784-JUNE 1786 at 4-6 (D. Jackson & D. Thowig eds., 1978).

⁶⁶ See *id.* at 4-6, 38-41.

⁶⁷ The "eastern waters" of West Virginia drain to the Chesapeake Bay and include the Potomac River watershed in the Eastern Panhandle and Potts Creek watershed in Monroe County. The "western waters" drain to the Ohio River.

and it would be greatly injurious both to the poor and to the community in general, if such lands were monopolized and possessed by a few.

RESOLVED, that the said unappropriated lands shall remain as common, and not be appropriated to any person or numbers of person whatever; and the Registrar of the Land Office is hereby directed to govern himself accordingly.⁶⁸

Whether the Virginia Senate also adopted this resolution is unknown, since its records for the 1780 session were lost.⁶⁹ But within the month, the General Assembly had apparently decided that a mere resolution was inadequate and enacted legislation⁷⁰ (hereinafter "1780 Act") which modified the common law rule on the eastern waters by reserving from any patent issued thereafter "the shores of any river or creek, *and the bed of any river or creek*"⁷¹ in the eastern parts of this Commonwealth ... which have been used as common to the good people thereof."⁷² The 1780 Act was attenuated in the scope of waters reserved: the shores of the Chesapeake Bay, the sea and the "rivers and creeks" tributary to them, but only if they remained "ungranted by the former [Colonial] government" and had been

⁶⁸ See VA. GENERAL ASSEMBLY, J. OF THE HOUSE OF DELEGATES OF THE COMMONWEALTH OF VA. 1780 at 14.

⁶⁹ See W.L. Hall, *Missing Journals of the General Assembly of the State of Virginia*, 23 BULL. OF THE VA. STATE LIBR. 117, 153 (1950).

⁷⁰ See VA. GENERAL ASSEMBLY, J. OF THE HOUSE OF DELEGATES OF THE COMMONWEALTH OF VA. 1780 at 18-20, 27. See Act of May, 1780, ch. 2, 10 Va. Hening's Stat. 226.

⁷¹ Italics indicate the 1792 amendment of the 1780 Commons Act which added "and the bed of any river or creek" to the original statute. See Act of Dec. 17, 1792, ch. 73, 1 *Shep.* 65.

⁷² See 1780 Va. Acts ch. 2, § 6; 10 Va. Hening's Stat. 226. The full text of the Act, as amended in 1792, at 1 *Shep.* 65, follows:

WHEREAS, certain unappropriated lands on the bay, sea, and river shores, in the eastern parts of this Commonwealth, have been heretofore reserved as common to all the citizens thereof; and whereas, by the act of the General Assembly, entitled, *An Act for establishing a land office, and ascertaining the terms and manner of granting waste and unappropriated lands*, no reservation thereof is made, but the same is now subject to be entered for and appropriated by any person or persons; whereby the benefits formerly derived to the public therefrom, will be monopolized by a few individuals, and the poor laid under contribution for exercising the accustomed privilege of fishing:

Be it therefore enacted by the General Assembly, That all unappropriated land on the bay of *Chesapeake*, on the sea shore, or on the shores of any river or creek, and the bed of any river or creek in the eastern parts of this Commonwealth, which have remained ungranted by the former government, and which have been used as common to all the good people thereof, shall be, and the same are hereby excepted out of the said recited act; and no grant issued by the registrar of the land office for the same either in consequence of any survey made, or which may hereafter be made, shall be valid or effectual in law, to pass any estate or interest therein.

“used as common.”⁷³

During the colonial period, some tracts of common lands were established and used for hunting, fishing, and fowling and included uplands, marshes, and the shores of the Bay and tributary rivers and creeks.⁷⁴ But the English practice of designating common lands for pasturage and other community uses did not achieve the same prevalence in Virginia.⁷⁵ A commons could be created either by designation of the colonial government⁷⁶ or general and customary public use of ungranted lands.⁷⁷ The “rivers and creeks” which were used as common and were thereby excepted from future patents by the 1780 Act were those used by the public for fishing, fowling, or hunting⁷⁸ or for regular and established navigation.⁷⁹

Many colonial governmental and historical records have been lost, and it is probably impossible to identify all of those eastern watercourses which were “used as common” for navigation.⁸⁰ On the eastern waters of West Virginia, the governmental records and historical accounts found by this author identify the Potomac River upstream to Cumberland,⁸¹ the South Branch Potomac,⁸² and the Shenandoah

⁷³ See *Barre*, 1 S.E. at 733; *Garrison v. Hall*, 75 Va. 150, 161 (1881); see generally *Mead*, 24 Va. (3 Rand.) at 33; see generally *Martin*, 9 Va. (5 Call) at 444.

⁷⁴ See *Miller v. Commonwealth*, 166 S.E. 557, 563-65 (Va. 1932); *EMBREY*, *supra* note 26, at 212-16; *Butler*, *supra* note 51, at 867-75.

⁷⁵ See *Butler*, *supra* note 51, at 867-75.

⁷⁶ Common lands were designated by enactments of the General Assembly, by the orders of the Colonial Council and also by the Council's practice of merely refusing applications to issue patents for such lands. See *Miller*, 166 S.E. at 564. See also *Butler*, *supra* note 51, app. at 923-35 (Colonial statutes, Council orders and source materials on designation of common lands).

⁷⁷ See *Bradford v. Nature Conservancy*, 294 S.E.2d 866 (Va. 1982); *Miller*, 166 S.E. at 564-65. See also *French v. Bankhead*, 52 Va. (11 Gratt.) 136 (1854).

⁷⁸ See *Bradford*, 294 S.E.2d at 871-72; *Garrison*, 75 Va. at 159-61. See also *Miller*, 166 S.E. at 564-65.

⁷⁹ See *James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp.*, 122 S.E. 344, 347-48 (Va. 1924); see *Mead*, 24 Va. (3 Rand.) at 36. See also *Hayes v. Bowman*, 22 Va. (1 Rand.) 417, 420 (1823) (holding that undated patent issued by “Commonwealth,” apparently not a Colonial patent and presumably subject to 1780 Act, would convey to grantee the bed of a non-tidal river provided it was not navigable); see generally *Crenshaw*, 27 Va. (6 Rand.) at 245; *supra* text accompanying note 50.

⁸⁰ See *EMBREY*, *supra* note 26, at 216, 224; 1 *CALENDAR OF VIRGINIA STATE PAPERS AND OTHER MANUSCRIPTS* at xiv (William P. Palmer ed. 1875).

⁸¹ See Act of Feb. 12, 1772, ch.31, 8 Va. Henning's Stat. 570 (an act for improvement of navigation on the Potomac River above tidewater to Fort Cumberland); *JEFFERSON*, *supra* note 40, at 24-25.

⁸² See Act of Oct. 10, 1785, ch. 19, 12 Va. Henning's Stat. 60 (“an act for improving the navigation of the south branch of Potowmack river” from its mouth upstream to the North Fork by requiring all mill dams to install a “slope” for passage of fish and “canal or race” for boats by 1787); 4 *THE DIARIES OF GEORGE WASHINGTON, 1784-JUNE 1786*, *supra* note 65, at 51 (1784 survey by General Washington of navigable watercourses found South Branch Potomac was being used for navigation to Fort Pleasant (Old Fields, West Virginia) and possibly “fifty miles higher”).

Rivers⁸³ as subject to established use for navigation prior to 1780. A further search of the historical records could identify other watercourses used as a common circa 1780, as the Eastern Panhandle was then settled even in the headwaters of streams tributary to the Potomac River.⁸⁴ The plethora of orders issued by the county (fiscal) courts authorizing the construction of mill-dams pursuant to the Virginia Mill Act can offer very significant guidance.⁸⁵ After 1785, the Mill Act required that such orders include a finding that the streambed at a proposed mill site was vested in either the owner of the proposed mill-dam or the Commonwealth. On the eastern waters, such a finding of public ownership would necessarily require a determination of prior common use, probably navigation, on the subject watercourse.⁸⁶ Such orders could also impose requirements for sluices or locks to facilitate navigation, a detail which would also evidence common use of the watercourse.⁸⁷

The 1780 Act reference to reserving only the “shores” of the rivers or creeks and subsequent inclusion of the “bed” in the 1792 legislation has been a source of ambiguity which remains unresolved by judicial authority in either Virginia or West Virginia. Was the 1792 amendment a clarification of earlier legislative intent or a substantive revision of the statute? The question is important in the Eastern Panhandle, where many Land Office patents were issued during the 1780-1792 period.

Some Virginia cases and other authority refer to the 1792 amendment as reserving the non-tidal watercourses,⁸⁸ while one West Virginia case and other authorities cite the 1780 Act for the same proposition.⁸⁹ But none of these cases involved a patent issued between 1780 and 1792, and the question of the amendment’s effect was not a dispositive consideration. Taken literally, the effect between 1780 and 1792 would have been to reserve only the banks in public ownership while the beds between them passed to a private grantee — an unlikely legislative goal. The best authority is the construction provided by the General Assem-

⁸³ *Report of James Herron on the Surveys of the Shenandoah River and Valley*, 19 ANN. REP. OF THE VA. BOARD OF PUB. WORKS 349, 353 (1834) (navigation has been common on Shenandoah River upstream to Port Royal, Virginia, since 1720’s); 4 THE DIARIES OF GEORGE WASHINGTON, 1784-JUNE 1786, *supra* note 65, at 53-54, 58-59.

⁸⁴ *See* RICE, *supra* note 19, at 22-26 (in 1750’s, estimated population of 7,000 to 8,000 in upper Potomac tributaries of West Virginia).

⁸⁵ *See infra* text accompanying notes 215-22.

⁸⁶ *See Mead*, 24 Va. (3 Rand.) at 36.

⁸⁷ *See* *Loving v. Alexander*, 745 F.2d 861, 866 (4th Cir. 1984). *See also* *Gaston*, 10 S.E. at 64-65.

⁸⁸ *See* *Miller*, 166 S.E. at 565-66; *Mead*, 24 Va. (3 Rand.) at 36. A 1982 formal opinion by the Attorney General of Virginia for the Virginia Marine Resources Commission relies upon the 1792 amendment as the reservation of non-tidal eastern waters. 1981-82 Va. Op. Att’y Gen. 242 (1982).

⁸⁹ *See* *Boerner*, 89 S.E.2d at 26-27; *James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp.*, 122 S.E. 344, 348 (Va. 1924). In dictum the West Virginia Supreme Court, in *Gaston v. Mace*, referred to a 1780 reservation date. *See* *Gaston* 10 S.E. at 66.

bly in the 1849 recodification of the Virginia Code, which relied upon 1780 as the effective date of reservation of the eastern waters used as common.⁹⁰

D. *All Ungranted "Rivers and Creeks" on Western Waters Designated As "Common" and Reserved by 1802 Common Lands Act*

In 1802, the General Assembly turned its attention to the "western waters," which lie in much of contemporary West Virginia. With a significant change in terminology from the earlier eastern waters legislation, the General Assembly enacted a new statute to reserve the "banks, shores and beds of the rivers and creeks in the western parts of the Commonwealth, which were intended and ought to remain as a common to all the good people thereof" (hereinafter "1802 Act").⁹¹ In an expansive departure from the 1780 Act, which reserved only those eastern waters previously "used as common", the 1802 Act declared that the western waters were "intended and ought to remain as a common" to the effect that all the ungranted "rivers and creeks" were excepted from patents issued by the Land Office without any condition precedent of an established public use for navigation, fishing, or other use as a common.⁹² The historical records and legislative materials related to the 1802 Act are scant and, other than the earlier 1780 Act's references to fishing, fowling and hunting, the specific policy and political considerations of the General Assembly may be lost to time. But in *United States v. Appalachian Elec-*

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In drafting and reporting the 1849 Virginia Code, the revisers were instructed to consolidate and clarify existing statutes without making substantive revisions. See VA. CODE at vii (1849). In the 1849 Code, the common lands act provided that rivers and creeks "used as a common ... shall continue as such common according to the acts of May seventeen hundred and eighty, and January eighteen hundred and two" and made no reference to the 1792 amendment. See Va. Code ch. 62, § 1 (1849). The revisions to the common lands act set forth in the 1849 Code represent a legislative construction of the 1780 and 1802 Acts as originally enacted. See *Garrison v. Hall*, 75 Va. 150, 161 (1881).

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See Act of Jan. 15, 1802, 1801-02 Va. Acts ch. 8; 2 *Shep* 317. The 1802 legislation amended the earlier 1780 Commons Act for the eastern waters as reenacted in the 1792 consolidation of the Land Office Act. The full text follows:

WHEREAS it hath been represented to this present General Assembly, that many persons have located, and lay claim in consequence of such location, to the banks, shores and beds of the rivers and creeks in the western parts of this Commonwealth, which were intended and ought to remain as a common to all the good people thereof: *Be it therefore enacted*, That no grant issued by the register of the land office for the same, either in consequence of any survey already made, or which may hereafter be made, shall be valid or effectual in law to pass any estate or interest therein.

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See *United States v. Appalachian Elec. Power Co.*, 23 F. Supp. 83, 101 (W.D. Va. 1938). See also *Gaston*, 10 S.E. at 66 (stating in *dictum* that the bed of Stonecoal Creek in Lewis County would be in public ownership if the patents to riparian landowners were issued after the 1802 Act without reference to any requirement of prior use as a common.); *Crenshaw*, 27 Va. (6 Rand.) at 269 (referring in *dictum* to the lower seventy miles of Middle Island Creek in Wetzel, Tyler and Doddridge Counties as "a stream, whose bed and banks were declared by the act of 1802, to belong to the public, for the common use of all, and incapable of being granted to any individual, by any prior or subsequent patent").

tric Power Co.,⁹³ in considering the navigability of the New River in Virginia and West Virginia, the United States District Court for the Western District of Virginia commented on the 1802 Act:

That portion of the State was then largely unsettled and the state was the proprietary owner of great areas of land of which it was, from time to time, making grants to individuals. That it should see fit to reserve the beds of streams, in order that they should remain under ownership of the commonwealth to be controlled for the public good, was not unusual. But the power to do so was not dependent on the navigability of the stream. The power was that of any owner to grant what he chose and keep what he chose.

The provision of the 1802 Act that “no grant issued...in consequence of any survey already madeshall pass any estate (in beds and banks)” at first appears retroactive in effect. Historically, this provision has caused some confusion and debate concerning whether the enactment was an unconstitutional taking of property already conveyed by earlier Land Office patents. However, the West Virginia Supreme Court has found this retroactive provision relates only to surveys in contemplation of a subsequent application for a Land Office patent and does not apply to patents issued prior to January 15, 1802.⁹⁴

E. Virginia Revisions to the 1780 and 1802 Acts and the Creation of West Virginia

In 1819, the several acts concerning the Land Office were again consolidated in the first codification of Virginia statutory law, and the 1780 Act (as revised in 1792) and the 1802 Act, were combined.⁹⁵ In 1849, the Code was again revised and the common lands act read:

All unappropriated lands on the bay of Chesapeake, on the sea shore, or on the shores of rivers or creeks, and all the beds of rivers and creeks, which remained ungranted by the former government, and which have been used as a common to all the people of this state, shall continue to be such common according to the acts of May seventeen hundred and eighty, and January eighteen hundred and two; and any of the people of this state may fish, fowl or hunt on the said

⁹³ See *supra* note 93.

⁹⁴ See *Barre*, 1 S.E. at 738; *infra* note 138 and accompanying text.

⁹⁵ See VA. CODE ch. 86, § 6 (1819).

shores or beds.⁹⁶

This provision remained unchanged in the Code of 1860⁹⁷ and represents the last version of the common lands act prior to the creation of West Virginia in 1863. Following the partition of Virginia, the common lands act remained part of the statutory law of Virginia with the exception of a repeal of short duration during the Reconstruction era.⁹⁸ Otherwise, with only minor revisions, Virginia has retained similar statutory language to the present day.⁹⁹

The property interests in watercourses reserved to the Commonwealth were transferred to the new State of West Virginia effective June 20, 1863, pursuant to the general property transfer legislation enacted by the General Assembly of the Restored Government of Virginia.¹⁰⁰ Unlike Virginia, the West Virginia Legislature has never enacted specific statutory provisions for the management of the common lands. As provided both in the first Constitution of West Virginia (1863) and by enactment of the new Legislature, the Code of Virginia continued as the statutory law of West Virginia unless expressly amended or repealed¹⁰¹ until 1868, when the State adopted its own Code.¹⁰² The 1868 Code did not include the common lands act, with the effect that it was repealed effective April 1, 1869.¹⁰³ However, both the 1863 and 1872 Constitutions of West Virginia provided that all private rights and interests in lands derived under the laws of Virginia were to be determined by such laws¹⁰⁴ and the 1868 Code included a statutory provision to the same effect.¹⁰⁵ Further, the 1868 Code, and all of its successors, included the generic provision that “[s]uch repeal shall not affect ... any right established, accrued, or accruing” before the Code took effect.¹⁰⁶ This West Virginia constitutional and statutory authority confirmed the extent of private property interests derived under

⁹⁶ See VA. CODE ch. 62, § 1 (1849).

⁹⁷ See VA. CODE ch. 62, § 1 (1860).

⁹⁸ In 1872, Virginia enlarged the reservation of lands from Land Office patents to include all the remaining shores, beds and banks whether or not they were previously used as common. See Livingston, *supra* note 55, at 355-62; *infra* note 133.

⁹⁹ See VA. CODE ANN. § 28.2-1200 (Michie 1997); *infra* note 133.

¹⁰⁰ See ACTS OF THE ASSEMBLY OF THE RESTORED GOV'T OF VA. ch. 68, § 1 (1863).

¹⁰¹ See W. VA. CONST. of 1863, art. XI, § 8; Act of Nov. 14, 1863, ch. 103, 1863 W. Va. Acts 136.

¹⁰² See W. VA. CODE ch. 166, § 1 (1868).

¹⁰³ See *id.*

¹⁰⁴ See W. VA. CONST., art. IX, § 1; W. VA. CONST. art. VIII, § 13.

¹⁰⁵ See W. VA. CODE ch. 68, § 1 (1868).

¹⁰⁶ See W. VA. CODE ch. 166, § 2 (1868); W. VA. CODE ch. 166, § 2 (1923); W. VA. CODE § 63-1-2 (1997).

Virginia patents¹⁰⁷ and, conversely, the common lands reserved from such patents issued prior to June 20, 1863. Further, as discussed below, the application of the 1860 Virginia common lands act to all West Virginia land grants manifests Legislative intent to preserve the common lands and maintain the public uses authorized by the Virginia statute.

F. Reservation of Watercourses from West Virginia Land Grants, School Land Deeds and State Auditor Deeds

By the time West Virginia was created in 1863, the great majority of “waste and unappropriated lands” had been granted or patented.¹⁰⁸ A much smaller category of lands were “entered” (located and surveyed by the “entrymen” holding treasury warrants issued by the Virginia Land Office) with a right to receive a patent upon filing a survey and completing other procedural requirements.¹⁰⁹ Only isolated tracts remained which were “unentered” and available for sale by the new state of West Virginia. In December, 1863, the Legislature accommodated the holders of the Virginia treasury warrants for lands entered before June 20, 1863, by authorizing the Governor to issue grants for such lands under the same provisions set forth in the Virginia Land Office Act.¹¹⁰ These West Virginia land grants were subject to the same reservation of the beds and banks of watercourses as set forth in the common lands act in the 1860 Virginia Code.¹¹¹ This provision would appear to manifest Legislative intent to maintain the status quo regarding the common lands. Most West Virginia land grants had been issued by the early 1870’s and the procedure was discontinued in 1884.¹¹²

With the exception for “entered” lands, the new State immediately abolished by Constitutional provision the treasury warrant and patent system used by the Virginia Land Office.¹¹³ In its stead, a new system was created in 1865 for the

¹⁰⁷ See *State v. Miller*, 99 S.E. 447, 447-49 (W. Va. 1919); *Forqueran v. Donnally*, 7 W. Va. 114, 120-21 (1874).

¹⁰⁸ See *McClure v. Maitland*, 24 W. Va. 561, 564 (1884).

¹⁰⁹ See *Braxton v. Rich*, 47 F. 178, 182-83 (C.C.D. W. Va. 1891); *Powell v. Field*, 155 S.E. 819 (Va. 1930); *McClure*, 24 W. Va. at 563-69; GENTRY, *supra* note 11, at xxii-xxix.

¹¹⁰ See Act of Dec. 9, 1863, ch. 134, §§ 1, 3, 1863 W. Va. Acts 241 (requiring compliance with the procedural provisions of chapter 112 of the Virginia Code of 1860 for the issuance of patents by the Virginia Land Office).

¹¹¹ See Act of Dec. 9, 1863, ch. 134, § 1, 1863 W. Va. Acts 241 (requiring that West Virginia land grants comply with section 43 of the Virginia Land Office Act (VA. CODE ch. 112, § 43 (1860)) which prohibited any grants of “lands which are a common under chapter sixty-two”) (codified at W. VA. CODE ch. 68, § 1 (1884)).

¹¹² See W. VA. CODE ch. 68, § 3 (1884).

¹¹³ W.VA. CONST. OF 1863 art. IX, § 2; W.VA CONST. art. XIII, § 2; *State v. Miller*, 84 W. Va. 175, 177-78 (1919). The Virginia treasury warrant and patent system, and poor administration by the Land Office, were commonly blamed for great uncertainty in both title and the boundaries of patented lands throughout the

benefit of the School Fund. This system allowed a commissioner of school lands in each county, supervised by the State Auditor, to grant the remaining waste and unappropriated lands by deed.¹¹⁴ But in contrast to the land grants for the entered lands, watercourses were not initially excepted from the operation of the school land deeds.¹¹⁵ In 1872, the Legislature excluded “lands under the bed of the Ohio River”¹¹⁶ from sale by the commissioners of school lands, and in 1893 this exception was expanded to exempt “lands under the bed of the Ohio River or any other navigable stream”¹¹⁷ from such sales.

The last apparent sale of waste and unappropriated lands by the State of West Virginia occurred in Hancock County by a 1912 school land deed.¹¹⁸ Today, the State Auditor is authorized to sell any remaining waste and unappropriated lands, except those “lands lying under the bed of a navigable stream,” but there are no records of any such sales.¹¹⁹ West Virginia case law holds that navigable waters were never considered to be “waste and unappropriated land” subject to sale by this State.¹²⁰ Dicta in a Virginia case support a similar conclusion for lesser streams reserved as common lands by the 1780 and 1802 Acts,¹²¹ but there is no West Vir-

new State. During the mid-19th century, this detritus of the Virginia patent system was frequently cited as one of West Virginia's great economic and legal problems and the immediate abolition of the patent system by the new State was the result. *Braxton*, 47 F. 178 at 182-83; *McClure*, 24 W. Va. 561 at 563-69; *Forqueran v. Donnally*, 7 W. Va. 114 at 119; *Twiggs v. Chevallie*, 4 W. Va. 463, 469 (1871). III DEBATES AND PROCEEDINGS OF THE FIRST CONSTITUTIONAL CONVENTION OF WEST VIRGINIA, 347-356, 437 (1861, 1862, 1863). *Message of Governor John H. Jacobs to the Legislature* (Nov. 19, 1872), JOURNAL OF THE HOUSE OF DELEGATES OF WEST VIRGINIA, 21, 28 (1872-73).

¹¹⁴ Act of Mar. 2, 1865, 1865 W. Va. Acts 92. W. VA. CODE § 105 (1868). W. VA. CODE § 68 (1884) (unlike the former Virginia treasury warrant and patent system, where entrymen located lands of their choosing, the county surveyor and commissioner of school lands located specific tracts which were offered for sale). This reform was intended to eliminate the problems of title and boundary conflicts which were endemic under the Virginia system. III DEBATES AND PROCEEDINGS OF THE FIRST CONSTITUTIONAL CONVENTION OF WEST VIRGINIA, *supra* note 113, at 347-356, 437.

¹¹⁵ Act of Mar. 2, 1865, 1865 W. Va. Acts 93-2; W. VA. CODE § 105-2 (1868).

¹¹⁶ Act of Nov. 18, 1873, 1872-73 W. Va. Acts 134-3. This legislation was contemporaneous with the Legislature's authorization of a survey of public mineral resources under the bed of the Ohio River in Hancock Co. Act of Dec. 20, 1873, 1872-73 W. Va. Acts 185. The Legislature subsequently authorized the W. Va. Board of Public Works to lease minerals under the Ohio River in Hancock Co. and later authorized the Governor to lease minerals under the full extent of the Ohio. Act of Feb 21, 1877, 1877 W. Va. Acts 24; Act of Mar. 23, 1882, 1882 W. Va. Acts 189.

¹¹⁷ Act of Feb. 23, 1893, 1893 W. Va. Acts 24-3.

¹¹⁸ EDGAR B. SIMS, MAKING A STATE, 102 (1956). The county school land commissioners were supervised by the State Auditor but few records of their activities have been found in Office of the Auditor.

¹¹⁹ W. VA. CODE § 11A-3-42 (1995); W. VA. CODE § 11A-3-43(b) (1995). The State Auditor, as *ex officio* Commissioner of Delinquent and Non-entered Lands, appoints and supervises a Deputy Commissioner for each county who, *inter alia*, conducts any sales of waste and unappropriated lands on behalf of the Auditor. W. VA. CODE § 11A-3-33 (1995); W. VA. CODE § 11A-3-34 (1995).

¹²⁰ *Campbell, Brown & Co., Inc. v. Elkins*, 93 S.E.2d 248, 260-61 (1956).

¹²¹ *French v. Bankhead*, 52 Va. (11 Gratt.) 136, 167 (1854).

ginia authority on point. But given the paucity of “unentered lands” inherited by West Virginia, it appears that school land deeds are of minor significance to public and private rights in watercourses.

G. *An Aberration in the Common Law Rule: Campbell, Brown & Company v. Elkins*

Until 1956, the decisions of the West Virginia Supreme Court, principally *Barre v. Fleming*¹²² and *Gaston v. Mace*¹²³, had adopted, or at least acquiesced in, the interpretations of the common law and the 1780 and 1802 Acts adopted by the Supreme Courts of Virginia and Kentucky.¹²⁴ But in *Campbell Brown & Company v. Elkins*¹²⁵ the West Virginia Court effectively rejected its previous opinions and adopted an unprecedented rule, apparently erroneously, that all navigable watercourses in Virginia remaining in public ownership at independence were reserved.¹²⁶ Much more conventionally, the *Campbell, Brown* Court also adopted the same definition of navigable waters for state law purposes as that adopted by the United States Supreme Court in *United States v. Appalachian Electric Power Company*¹²⁷ to define the federal navigational servitude under the Commerce Clause.

In *Campbell, Brown*, the West Virginia Public Land Corporation claimed title to the bed of the Guyandotte River in Lincoln County and had leased it for coal dredging by Campbell, Brown & Company. The defendant in Circuit Court, Howard T. Elkins, claimed title to the riverbed as successor under patents issued by the Virginia Land Office in 1796 and 1797. The Guyandotte lies on the “western waters” and the Court acknowledged that the subject patents preceded the 1802 Act but declared that statute was not controlling since such waters were reserved at independence.¹²⁸ Instead, the Court relied upon and erroneously interpreted a single decision of the Virginia Supreme Court, *Norfolk City v. Cooke*,¹²⁹ which concerned ownership of the tidal bed underlying the Chesapeake Bay. The West Virginia Court quoted a *Norfolk City* syllabus point: “A patent for land constituting a part of the bed of a navigable river, conveys no title to it.”¹³⁰ No other cases, legal doc-

¹²² 29 W. Va. 314 (1887).

¹²³ 33 W. Va. 14 (1889).

¹²⁴ See *supra* text accompanying notes 22-33.

¹²⁵ 93 S.E.2d 248 (1956).

¹²⁶ *Id.* at 266-67.

¹²⁷ 311 U.S. 377 (1940).

¹²⁸ *Campbell, Brown*, 93 S.E.2d at 258, 266-67.

¹²⁹ 68 Va. (27 Gratt.) 430 (1876).

¹³⁰ *Campbell, Brown*, 93 S.E.2d at 267.

trines, or historical authority were cited for the Court's ruling.¹³¹ That tidal waters were involved made the Virginia case irrelevant to the non-tidal streams of West Virginia since, as discussed above, such tidal waters were always reserved at common law unless expressly granted. In *Norfolk City*, the Virginia Court cited three prior decisions holding that only tidal waters were reserved at common law.¹³² With *Campbell, Brown*, the West Virginia Court confirmed the early 19th century reticence of the federal courts to acknowledge the true English rule that non-tidal waters may be navigable-in-fact for fear that assertions of public title would follow.

But even more than the common law peculiarities of tidal waters, the facts of *Norfolk City* weigh against the West Virginia Court. The riparian patent was issued in November, 1873, and was subject to the statutory reservation of the tidal shores and beds pursuant to the recodified version of the 1780 Act for the eastern waters which statute was cited by the Virginia Court.¹³³ In *Campbell, Brown*, the subject 1796 and 1797 patents preceded the 1802 version of the common lands act for the western waters. Ironically, while our Court dismissed the significance of that statute, it mistakenly relied upon the *Norfolk City* decision, apparently believing it to be the common law, when in fact the Virginia Court was interpreting the effects of essentially the same statute upon a much later patent. In the final insult, the subject tidal bed was not even owned by the Commonwealth — the General Assembly had made a rare legislative grant of the bed to the City of Norfolk, which actually held title.¹³⁴

The West Virginia Court offered no rationale for abandoning its prior adherence to the Virginia rule as manifested in its two prior decisions, *Barre v. Fleming*¹³⁵ and *Gaston v. Mace*¹³⁶. But while the mistakes of *Campbell, Brown* are significant, the practical repercussions are modest. First, it does not affect Colonial patents or Northern Neck Proprietary grants issued during the colonial period. Secondly, the case addressed a navigable river — the smallest category of watercourses. The holding is not applicable to the floatable and non-floatable streams which comprise the great majority of West Virginia streams. Thirdly, the 1796 and 1797 patents were issued during the twenty-three year “gap” between the creation of the Virginia Land Office in 1779 and the enactment of the 1802 common lands

¹³¹ The Court did not discuss or cite the federal state sovereign lands doctrine which does impose certain limitations, effective at independence, upon the alienation of submerged non-tidal waters. See *supra* text accompanying notes 304-311.

¹³² *Norfolk City*, 68 Va. (27 Gratt.) at 433-34.

¹³³ *Id.* at 433-34. Only a few months prior to the issuance of this patent, the Virginia General Assembly had reenacted the common lands act, after its repeal during Reconstruction, and deleted the original 1780 “used as common” requirement to the effect that all shores and beds were reserved without qualification. Act of Jan. 16, 1873, ch. 331, §1 1873 Va. Acts 33, Livingston, *supra* note 55.

¹³⁴ *Norfolk City*, 68 Va. (27 Gratt.) at 431, 436.

¹³⁵ 29 W. Va. 314 (1887).

¹³⁶ 33 W. Va. 14 (1889).

act for the western waters. But historically, the great majority of Land Office patents issued in western Virginia during the 1779-1802 period were forfeited for non-entry or delinquent taxes to the effect that most post-independence land titles originate with patents issued after the 1802 Act.¹³⁷ The errors in *Campbell, Brown* should have limited effect upon the western waters.

As to the eastern waters, grants by the Northern Neck Proprietary during the colonial period dominate the riparian lands in the Eastern Panhandle and are not affected by this ruling. Further, Commonwealth patents on the eastern waters are subject to the 1780 Act reserving streams "used as common". But here *Campbell, Brown* becomes more problematic, since it would assert public title to navigable rivers in instances where a lack of common use would, under the English rule, vest title in the riparian patentee. While *Campbell, Brown* is presently the law in West Virginia, its holding is precarious and ripe for reconsideration.

IV. IDENTIFYING THE "RIVERS AND CREEKS" RESERVED BY THE 1780 AND 1802 ACTS

A. *The Query of Thomas Jefferson: "How Is a Line To Be Drawn Between Rivers and Creeks and Other Brooks and Branches?"*

The 1780 and 1802 Acts provide no definition of the "rivers and creeks" reserved in public ownership. In 1811, Thomas Jefferson commented upon the legal character of the two acts and the uncertainty of their application:

I am told there is a law passed some few years back declaring there shall be no future grants of the beds of rivers or creeks, and annulling all the past. The former is within the powers of the legislature, the latter is not. They can neither pass a law that my head shall be struck from my body without trial, nor my freehold taken from me without indemnification ... the public can use the bed of the river without taking the property of it from me. By the common law, which was the law here till this act, the King cannot grant away tide waters; they are reserved for the use of the nation. But all other waters were ever grantable here as well as in England. And how is a line to be drawn between rivers & creeks, and other brooks and branches?¹³⁸

¹³⁷ McClure v. Maitland; 24 W. Va. 561, 563-65 (1884). Rice, *supra* note 19 at 129-149. See generally, Sims, *supra* note 18.

¹³⁸ Letter from Thomas Jefferson to Virginia Governor James Monroe (January 8, 1811), reprinted in, E. M. BETTS, ED., THOMAS JEFFERSON'S FARM BOOK, 383 (1953). In a January 16, 1811 letter to Governor Monroe, Mr. Jefferson wrote that he had reviewed the two statutes in question and found they were not retrospective in intent since "they admit ... the validity of former grants of the bed of watercourses...." FARM

From 1680 through the present, the use of “rivers and creeks” as a statutory term appears repeatedly and consistently in Virginia legislation concerning obstructions to navigation, ferries, common lands and other matters affecting watercourses.¹³⁹ The term clearly had a generally accepted meaning and, under the rules of statutory construction, the common and ordinary meaning is applied in the absence of a statutory definition or clear legislative intent to the contrary.¹⁴⁰ An examination of the case law, colonial and Commonwealth statutes and historical authorities clearly establish that the term “rivers and creeks” includes those larger watercourses of such seasonal flow, depth, and breadth as were capable of being utilized for transportation during the 18th and 19th centuries. In this regard, the statutory reference is commensurate with the common law definition of “navigable” and “floatable” streams discussed below. But “rivers and creeks” also includes those streams of commensurate physical magnitude which, by reason of natural obstructions or steep gradient, would not have been utilized for navigation or floatage.

B. English Distinction Between Rivers and Creeks and Its Modification in Early Virginia

In the 17th century, the English distinction between “rivers” and “creeks” was related to the establishment of ports and the regulation of customs and trade — not necessarily the physical characteristics of the waterways. English ports encompassed a large geographic area centered on a harbor or tidal river which were designated by a “caput portus” (principal town) and established by either royal franchise or immemorial usage.¹⁴¹ In the late 1660’s, English Chief Justice Lord Hale wrote:

Creekes are of two kindes, vizt.: i. such as are really members of ports, or small landings places within the extent thereof; or ii. such places as though in theyr own nature are as much ports as others, yet are commonly called creekes, bycause the Kinge hath no fixed custome officers there; but

BOOK, 384. The 1780 and 1802 Acts came to the attention of Mr. Jefferson when he contested the claims of public ownership of the Rivanna River, adjacent to his estate at Shadwell, asserted by the Rivanna Navigation Company.

¹³⁹ EMBREY, *supra* note 26 at 237-55.

¹⁴⁰ See *State v. White*, 425 S.E.2d 210 (W.Va. 1992); *Application of Metheney*, 391 S.E.2d 635 (W.Va. 1990). SINGER, SUTHERLAND STATUTORY CONSTRUCTION, § 47.27 and 47.28. (5th ed. 1992).

¹⁴¹ Hale, *supra* note 46, at 47. S. MOORE, A HISTORY OF THE FORESHORE AND THE LAWS RELATING THERETO, 319-323, (London: Stevens & Haynes eds., 1888) (reprinting “A Narrative Legall and Historical Touchinge The Customes,” a previously unpublished treatise of Chief Justice Lord Matthew Hale which preceded *De Jure Maris*).

the custome house and custome office is held at the caput portus.¹⁴²

In 1671, in *De Jure Maris*, Lord Hale added that “creeks” included “little inlets of the sea....which are narrow little passages, and have shore on either side of them” whether or not included within a port.¹⁴³ Creeks were thereby either large or small tidal watercourses which were navigable-in-fact. Some early Colonial records adhered to the English distinction. In his famous 1671 report on conditions in Virginia, Colonial Governor Sir William Berkeley advised the British Lords Commissioners of Foreign Plantations that “[r]ivers, we have four, [James, York, Rappahannock and Potomac] all able, safely and severally to bear and harbour a thousand ships of the greatest burthen.”¹⁴⁴ A 1702 report from the Virginia Colonial Secretary to the British Board of Trade submitted a “List of the Navigable Rivers, Creeks et’d & officers belonging to the high Court of Admiralty, Custome houseon the Severall Rivers in Virginia.”¹⁴⁵ The 1702 report lists six “navigable rivers” (James, York, Potomac, Rappahannock, Northampton and Accomack) and the judicial, customs and Admiralty officers assigned to each.¹⁴⁶ Under these six “navigable rivers,” the Colonial Secretary further identifies forty-eight “navigable creeks and members thereunto belonging,” several actually named a “river,”¹⁴⁷ under the jurisdiction of such officers. But the 1702 Report, reflecting the organization of the British Admiralty, is anomalous,¹⁴⁸ since the English distinction between rivers and creeks had already been discarded in Virginia.

¹⁴² Moore, *supra* note 141, at 320 (emphasis added).

¹⁴³ Hale, *supra* note 46, at 47-48.

¹⁴⁴ *Enquiries to the Governor of Virginia submitted by the lords commissioners of foreign plantations, and the governor's answers to each distinct head.* 2 Va. Henings Stat. 511-13, 515 (1671) (“a more correct statistical account of Virginia, at that period, cannot, perhaps, any where be found.”).

¹⁴⁵ Letter of E. Jennings, Colonial Secretary of Virginia, to the British Board of Trade, London (July 18, 1702), *reprinted in*, 1 VA. MAG. OF HIST. AND BIOGRAPHY 362-64 (1894).

¹⁴⁶ *Id.* at 362-64.

¹⁴⁷ E.g., the 1702 Report identifies the Elizabeth River, Hampton River, Nanesemond River and Warwick River as “navigable creeks” of the James River.

¹⁴⁸ The 1702 Colonial Secretary Report necessarily reflected the English distinction concerning ports, rivers and creeks rather than the evolving Colonial practice. The Vice Courts of Admiralty, an inferior branch of the British High Court of Admiralty in London, exercised admiralty jurisdiction (e.g., salvage, desertion, maritime wage and contract disputes, collection of navigation taxes) in Virginia and other American colonies. The Vice Courts of Admiralty, whose officers were appointed from London, were established in 1696 due to poor enforcement of the navigation tax and maritime laws by the Colonial courts in Virginia and other colonies. 7 & 8 William III Chap. XXII (1696). *Willare v. Dorr*, 3 Mason 91 (C.C. Mass. 1822). M.G. Hall, *The House of Lords, Edward Randolph and the Navigation Act of 1696*, 499-503, 14 WILLIAM & MARY QUARTERLY (1957). Therefore, the 1702 Report merely recited the administrative organization of the British Vice Court of Admiralty in Virginia which continued to utilize the English distinction concerning ports, rivers and creeks.

Local conditions in Virginia probably contributed to a geographic definition of “rivers and creeks” rather than the English distinction. Unlike Britain, dominated by long established ports, Virginia’s dispersed plantations relied upon small boats for transportation from the upper reaches of tidal rivers and creeks downstream to isolated landings which could be reached by larger vessels.¹⁴⁹ In 1655, the Virginia General Assembly enacted “An Act for regulating of Trade and establishing Ports and Places for Marketts” which authorized no more than two ports on “any small river or creeke” within a county.¹⁵⁰ In 1691, the General Assembly designated approximately twenty “ports,” many of which were situated upon a “creeke.”¹⁵¹ In the first comprehensive geographic work on Virginia, *The History and Present State of Virginia*, published in 1705, the colony is described as “watered with Four great rivers, viz. James, York, Rappahannock, and Patowmeck Rivers.... There are also abundance of lesser Rivers.”¹⁵²

C. *The Colonial Stream Obstruction Acts*

Between 1680 and 1748, the Colonial government enacted legislation protecting “rivers and creeks” from obstructions.¹⁵³ The 1680 legislation, entitled “An act for the well clearing the heads of rivers and creeks from loggs and trees for the safe passing of sloops and boates,” required the removal of such obstructions up to the “head”¹⁵⁴ (upper limits of tidal action).¹⁵⁵ In 1705, the county courts were required to clear the “rivers and creeks... from all trees, roots, or other things, which may be dangerous to any boat, sloop or other vessel” and further provided “if any person shall fall any tree into any river or creek” he would be fined if the tree were not immediately removed.¹⁵⁶ The 1705 legislation contemplated that the “rivers and creeks” included streams so small as to have their navigation impaired by

¹⁴⁹ Bruce, *supra* note 9, at 103-05 (Vol. I), 426-39, 524-25 (Vol. II).

¹⁵⁰ 1 Va. Hening’s Stat. 412 (1655).

¹⁵¹ 3 Va. Hening’s Stat. 53 (1691). E.g., ports for York County situated on “Smiths Creeke”, Middlesex County upon “Nimcock Creeke” and Northampton County upon “Cherry Stone Creeke.”

¹⁵² Beverly, *supra* note 9 at xiii, 120.

¹⁵³ EMBREY, *supra* note 26 at 237-243. In addition to the Colonial stream obstruction acts, other legislation also protected specific rivers and creeks, both tidal and non-tidal, from obstructions. See, e.g., 5 Va. Hening’s Stat. 375 (1745) (“An Act, for the more effectual clearing of James and Appomattox Rivers”). EMBREY, *supra* note 26, at 243-54.

¹⁵⁴ The “head” of a Virginia watercourse in the 17th and 18th centuries was the upper limit of the ebb and flow of the tide, being the head of navigation, and the “head spring” was its source. See Hite, 8 Va. (4 Call) at 46-48, 67. Harrison, *supra* note 11 at 75-76. See also Beverly *supra* note 9, at 124-25, 127-28.

¹⁵⁵ 2 Va. Hening’s Stat. 484-85 (1680).

¹⁵⁶ 3 Va. Hening’s Stat. 394-95 (1705).

felling a single tree.¹⁵⁷ The 1705 obstruction act did not include the 1680 limitation to the “head” and apparently included the non-tidal sections of watercourses. This legislation was contemporaneous with the expansion of the Virginia colony westward (upstream) of the fall line.

The 1705 obstruction act was not entirely successful, and the 1722 revisions recited that “the passage of boats and vessels” continued to be obstructed and that a new problem, “hedges” (stone or log fish traps), had appeared.¹⁵⁸ The 1722 obstruction act was subject to some ambiguity regarding both its purposes and whether the “rivers and creeks” also included those which were non-navigable. In 1726, the General Assembly resolved the ambiguity by reciting that the obstruction act was intended to protect both navigation and also bridges across the “rivers and creeks” many of which had been swept away by log jams created by felled trees and hedges.¹⁵⁹ To this end, the 1726 legislation expressly provided that, although the prior law was “thought not to extend to any other rivers or creeks, but what are navigable,” it instead applied to “rivers and creeks whatsoever” — both navigable and non-navigable.¹⁶⁰

In 1748, the General Assembly made the last revisions to the obstruction act during the colonial period (and prior to the 1780 common lands act) and expanded its purposes and the scope of protected watercourses.¹⁶¹ In addition to navi-

¹⁵⁷ See EMBREY, *supra* note 26, at 238.

¹⁵⁸ 4 Va. Hening’s Stat. 110-112 (1722). The 1722 legislation required the removal of all “hedges” which crossed rivers and creeks and prohibited them in the future.

¹⁵⁹ 4 Va. Hening’s Stat. 177-78 (1726). The statute provided:

WHEREAS some doubts have arisen, concerning the laws already made, relating to the clearing of rivers and creeks....said laws have been thought not to extend to any other rivers or creeks, but what are navigable: And whereas many inhabitants of this colony, have at their great charge built several bridges over the said rivers and creeks....which, by the falling of trees into the said rivers, and by means of hedged set cross the same, the course of the water hath been obstructed, and thereby the said bridges have been often times broken down and carried away, to the great prejudice of the said inhabitants: *II. Be it therefore enacted....* That all hedged already made cross any river or creek whatsoever.....shall be taken up and destroyed by the person or persons who made or placed the same; and that, for the future, no hedge that shall in wise obstruct the course or passage of the said rivers or creeks, or any of them, shall be placed or set therein

¹⁶⁰ *Id.* at 177-78. The 1726 legislation included an exception for hedged installed by a landowner “having land on both sides of a creek, to the head thereof [upper limits of tidal action], and no public landing thereon....” *Id.* at 178. But the exception did not apply to the non-tidal sections of such creeks. Apparently, while hedged were prohibited in the non-tidal sections to protect bridges, creeks without public landings on the tidewater were not considered as having much significance for navigation purposes. Virginia had previously designated as a public landing any point on a river or creek at which existed a tobacco warehouse or which intersected an established road which point had been commonly used as a landing. See 3 Va. Hening’s Stat. 394 (1705).

¹⁶¹ 6 Va. Hening’s Stat. 69-71 (1748). In 1792, the obstruction act were consolidated with the Mill Act (regulating mill-dams) which retained the same distinctions among rivers, creeks and runs. 1 Shep. 136, § 14-16 (1792).

gation and bridges upon the “rivers and creeks,” the act now protected the passage of fish in the “rivers, creeks, or runs” from obstructions. The 1748 act thereby acknowledged that the statutory term “rivers and creeks” did not include the “runs” which were a distinct category of smaller watercourses. The 1748 act recites the need to protect the “passage of boats, vessels, and of fish” in the “rivers and creeks” and to make them “passable for loaded boats.”¹⁶² But the protection of navigation did not extend to “runs” which are referenced only for protection of public bridges from felled trees and a prohibition on hedges obstructing the passage of fish.¹⁶³

The Colonial obstruction acts enacted between 1680 and 1748 contemplated that the statutory term “rivers and creeks” included watercourses which were both tidal and non-tidal and which could be either navigable or non-navigable for the boats and vessels commonly used during the 18th century. The lesser category of streams, “runs,” were not passable for such boats but were large enough to be crossed by public bridges and, at least at high water, to carry downstream a felled tree which could damage such bridges. It is these characterizations of “rivers,” “creeks,” and “runs” which were generally accepted when the 1780 and 1802 common lands acts were enacted. The English distinction between rivers and creeks was abandoned by the early 18th century, and the legal effect of these terms and their general geographic usage had merged. For purposes of the 1780 and 1802 acts, this interpretation of “rivers and creeks” is confirmed by subsequent cases, commonwealth surveys, and historical records.

D. *The General Survey of Virginia, 1819-1825*

Until the early 19th century, Virginia was without an official or even particularly accurate state map. A variety of considerations, including the identification of potential waterpower sites and the public improvement of navigable rivers, persuaded the General Assembly to authorize the general survey of Virginia in 1816.¹⁶⁴ The general survey, started only fifteen years after the 1802 Act, continued with the same characterization of watercourses as “rivers, creeks or runs” found in the stream obstruction acts of the preceding century.

The general survey would consist of surveys and individual maps of each county and a general state map.¹⁶⁵ Most significantly, the original 1816 act required that the county maps were to identify the “rivers, creeks, runs” and the “course of all the rivers, creeks and considerable streams of water....omitting none upon which

¹⁶² 6 Va. Henning's Stat. 69 (1748).

¹⁶³ *Id.* at 70.

¹⁶⁴ VA. CODE ch. 231 and ch. 321 (1819). E.M. SANCHEZ-SAAVEDRA, VIRGINIA STATE LIBRARY, A DESCRIPTION OF THE COUNTRY: VIRGINIA CARTOGRAPHERS AND THEIR MAPS, 1607-1881, 55-58 (1975).

¹⁶⁵ *Id.*

water works of any kind could be profitably erected.”¹⁶⁶ Shortly thereafter, Thomas Jefferson wrote to Governor Wilson C. Nicholas advising him on the general survey and the required “surveys of the Rivers” which Mr. Jefferson described as being both “navigable (and)....not navigable, but yet sufficient for working machinery.”¹⁶⁷ Recognizing the original general survey requirements were prohibitively burdensome, in 1817 the General Assembly authorized the Governor to modify the required detail while “keeping in view the attainment of the utmost practicable accuracy, and the delineation of the principal.....watercourses...in the county.”¹⁶⁸

In 1819, Governor James P. Preston appointed John Wood (1775-1822) as the Surveyor-General of Virginia. Wood personally conducted the surveys of the previously unmapped counties of western Virginia.¹⁶⁹ In regard to watercourses, the instructions of Governor Preston were generally consistent with the original 1816 legislation with each “river, creek or run” to be mapped.¹⁷⁰ At his death in May, 1822, Wood had completed the survey of each of the counties now comprising West Virginia, except Pocahontas County, and the mapping of most of them, with this work completed by his successor, Herman Boye. The “Wood-Boye” county maps and the general map of Virginia were considered among the most detailed in America before 1850 and served as the official state map until after the Civil War.¹⁷¹

For the purposes of the 1780 and 1802 Acts, the Wood-Boye county maps provide very significant guidance in differentiating the “rivers and creeks” subject to public reservation from the “runs,” which were not reserved. As with the Colonial stream obstruction acts, the English distinction was clearly abandoned and the legal effect of these terms and their general geographic usage had merged. The general survey materials indicated that “rivers and creeks” included both navigable and non-navigable streams and that “runs” were a smaller category of streams.

E. Case Law Applying the Common Lands Acts to Specific Watercourses

While numerous cases make reference to the 1780 and 1802 Acts, only a few discuss whether they apply to a specific watercourse. In 1824, in probably the

¹⁶⁶ VA. CODE ch. 231, § 2 (1819).

¹⁶⁷ EARL G. SWEM, MAPS RELATING TO VIRGINIA, 7 BULLETIN OF THE VIRGINIA STATE LIBRARY 104 (1914) (reprinting an April 19, 1816 letter from Thomas Jefferson to Governor Wilson C. Nicholas).

¹⁶⁸ VA. CODE ch. 232, §1 (1819).

¹⁶⁹ SANCHEZ-SAAVEDRA, *supra* note 164, at 61.

¹⁷⁰ 10 CALENDER OF VIRGINIA STATE PAPERS 484 (1892) (Articles of Agreement between Governor James P. Preston and Surveyor-General John Wood, April 1, 1819).

¹⁷¹ SANCHEZ-SAAVEDRA, *supra* note 164, at 61-64; SWEM, *supra* note 167, at 37-38.

most significant decision on point, *Mead v. Haynes*,¹⁷² the Virginia Court of Appeals considered whether the bed of Goose Creek in Bedford County, Virginia, on the eastern waters, was subject to the 1780 Act for purposes of granting a mill-dam application under the Virginia Mill Act.¹⁷³ The issue was whether Haynes, the applicant for the proposed mill-dam, had complied with the statutory requirement that the bed of the stream must be vested in either himself or the Commonwealth. Haynes and the Appellants, the heirs of William Mead, were riparian landowners on opposite sides of the Creek both with titles originating prior to the 1780 Act. In addition to their riparian lands, the Appellants claimed title to the bed of Goose Creek under a 1792 Land Office patent which included only the bed of Goose Creek for several miles.

Appellants had objected to the mill-dam application on the grounds that neither Haynes nor the Commonwealth held title to the streambed and, on these grounds, the County Court denied the application. The Superior Court found the bed was in the Commonwealth, reversed the denial of the application, and the heirs of Mead appealed. The Court of Appeals referred to the 1780 common lands act (referenced as § 6 of the 1792 Land Office Act) and stated:

That act prohibits the granting, since 1779, of the bed of any stream in the Eastern parts of the Commonwealth, which had been used as a common by the people of the Commonwealth; but not otherwise. The bed of Goose creek not being navigable...was grantable before 1779, and was grantable after that period, if not granted before, unless it appeared that it had been used as a common to all the people of the Commonwealth;....¹⁷⁴

The Court of Appeals found that the lack of “fish of passage and ordinary navigation” negated any claim of common use within the meaning of the 1780 Act.¹⁷⁵ But since both parties held title to riparian lands on opposing banks by title originating before the 1780 Act, the Court found that the 1792 patent to Mead for the streambed itself was void and that each party owned a “moiety” (one-half) of the streambed. The authorization to build the Haynes Mill was upheld.¹⁷⁶

Goose Creek drains the east slope of the Blue Ridge with a drainage area of approximately one hundred and twenty-four (124) square miles at the site of the

¹⁷² 24 Va. (3 Rand.) 33 (1824).

¹⁷³ See *infra* text accompanying notes 191-208.

¹⁷⁴ *Mead*, 24 Va. (3 Rand.) at 36.

¹⁷⁵ *Id.* at 36

¹⁷⁶ *Id.* at 36-40.

Haynes Mill. *Mead v. Haynes* confirms the earlier statutory and historical authority that “rivers and creeks” in the 1780 and 1802 Acts had the ordinary geographic meaning and included streams even if they lacked capacity for navigable use. But the case is also significant for another reason. Although the opinion was written by Judge Green, it was concurred in by Judge Francis T. Brooke (1763-1851). Judge Brooke formerly served in the Virginia Senate and chaired the *ad hoc* Senate committee which considered and passed the 1802 Act reserving the “rivers and creeks” on the western waters.¹⁷⁷ Given his Senate experience with this legislation, Judge Brooke’s concurrence in *Mead v. Haynes* provides a compelling perspective on the intentions of the General Assembly in enacting both the 1780 and 1802 Acts.

Four years after *Mead*, in dictum in *Crenshaw v. Slate River Company*¹⁷⁸ the Court makes reference to legislation designating the lower seventy miles of Middle Island Creek (upstream to West Union, W.Va.)¹⁷⁹ as a “public highway” thereby prohibiting any new mill-dams under the Virginia Mill Act. The Court observed that this section of Middle Island Creek was also “a stream, whose bed and banks were declared by the Act of 1802, to belong to the public, for the common use of all, and incapable of being granted to any individual, by any prior or subsequent patent.”¹⁸⁰ At West Union, the Creek is a modest watercourse with a drainage area of one hundred and twenty-one square miles — similar to Goose Creek in *Mead*.

In 1889, the West Virginia Supreme Court commented upon the 1802 Act in *Gaston v. Mace*,¹⁸¹ which concerned a claim for damages from the floating of saw logs over a mill-dam. In declaring that Stone Coal Creek was a floatable watercourse lawfully subject to such public use, the Court also commented on the 1802 Act:

[t]here are statutes of Virginia and of this State, which may or may not affect this question The record is so imperfect, that we do not know whether the statutes have or have not any application to the Stone Coal creek. These statutes are thus referred to and stated by Minor in his Institutes” At common law the beds of rivers not navigable are al-

¹⁷⁷ VA. SENATE JOURNAL 41-42, 46 (1801-02). During 1788-1790, Brooke practiced law in Morgantown and then returned to his native Spotsylvania County which he represented in the Virginia Senate from 1800 to 1804. Judge Brooke subsequently served forty years on the Court of Appeals until his death in 1851 - one of the three longest serving members of the Court. In 1831, in *Stokes & Smith v. The Upper Appomattox River Company*, 30 Va. (3 Leigh) 318 (1831), Judge Brooke wrote the Court’s most sanguine antebellum era decision on *jus publicum* and navigation on Virginia rivers.

¹⁷⁸ 27 Va. (6 Rand.) 245, 271 (1828)

¹⁷⁹ 1810 Va. Acts ch. 36.

¹⁸⁰ *Crenshaw*, 27 Va. (6 Rand.) at 269.

¹⁸¹ 10 S.E. 60 (W. Va. 1889).

ways private, and belong to the neighbor riparian proprietors In Virginia the principal is only so far changed as that by statute the banks, shores, and beds of all streams are reserved which were granted by the state east of the Blue Ridge after 1780, and west of it after 1802.” Whether this law would affect Stone Coal creek would depend on whether the riparian owners on that stream claim under patents prior or subsequent to 1802. What is the fact on this question the record does not disclose.¹⁸²

Gaston v. Mace is consistent with the Virginia decisions six decades earlier in *Mead* and *Crenshaw* but dealt with a much smaller watercourse. At the site of the Gaston Mill-dam, Stone Coal Creek is a relatively small stream with a drainage area of twenty-seven square miles.¹⁸³

In 1929, the Virginia State Corporation Commission (a Constitutional body with regulatory jurisdiction over public utilities) adjudicated the “Goshen Pass Case,”¹⁸⁴ in which it considered whether it had jurisdiction over a proposed hydroelectric dam in Rockbridge County by reason of, among other things, state ownership of the bed of the affected rivers. The dam was proposed on the North River (later renamed Maury River) at Goshen Pass and would also inundate several miles of the lower Big and Little Calpasture Rivers, the confluence of which formed the North River. Goshen Pass is a very prominent and scenic gap in western Virginia, and the application was opposed by a coalition of sportsmen groups and garden clubs. The Commission described the North River at Goshen Pass as a “comparatively small, shallow, swift flowing, rocky mountain stream of very variable stream flow” and found it was neither navigable nor floatable.¹⁸⁵ The Commission staff examined the origin of title to the affected riparian lands for which various tracts were patented both before and after the 1780 common lands act for the eastern waters.¹⁸⁶ The Commission then discussed the effect of the 1780 Act in reserving the “rivers and creeks” which had been “used as common” and determined:

¹⁸² *Id.* at 31.

¹⁸³ J. & C. GILCHRIST, LEWIS COUNTY, WEST VIRGINIA, A PICTORIAL HISTORY 120, 122 (1993). Letter of William H. Salesky, P.E., Pittsburgh District, U.S. Army Corps of Engineers to Larry W. George, Esq. (February 23, 1995) (Corps of Engineers determined the upstream drainage area of Stone Coal Creek at the Gaston Mill-dam site was 27.2 sq. mi.).

¹⁸⁴ *Application of the Virginia Public Service Company for a License to Construct a Dam Across North River, at the North End of Goshen Pass*, Case No. 3835, ANNUAL REP. OF THE STATE CORP. COMM., 197 (1929).

¹⁸⁵ *Id.* at 199.

¹⁸⁶ *Id.* at 204-07.

The streams here in question are ... (not) navigable or floatable streams; but the title to the beds thereof is vested in the Commonwealth unless the Commonwealth has granted its title thereto to private individuals....The record contains no evidence that North River in Goshen Pass or the portions of the Big and Little Calfpasture Rivers which will lie within the reservoir area ever had, at any time prior to the times (of) the several grants from the Commonwealth here in question to private persons, been used as a common to all the good people of the Commonwealth... we are of opinion, and so find, that the Crown and Commonwealth by the grants above-mentioned have granted the beds of those portions of these streams here in question to private persons; and the Commonwealth is not now the owner thereof....¹⁸⁷

The Commission held that it was without jurisdiction over the proposed hydroelectric dam as a result of the lack of public ownership of the beds of the affected watercourses.¹⁸⁸ Upon appeal, the ruling of the Commission was affirmed by the Virginia Supreme Court.¹⁸⁹ In contrast to the smaller streams in *Mead* and *Gaston*, the Maury River at Goshen Pass has an approximately three hundred and twenty (320) square mile drainage area.

The Goshen Pass case is the most recent judicial examination in either Virginia or West Virginia of the meaning of "rivers and creeks" and the scope of the common lands acts in reserving the beds of non-tidal waters. *Mead*, *Crenshaw*, *Gaston* and the Goshen Pass Case represent over a century of consistent judicial interpretation of the watercourses encompassed by the 1780 and 1802 Acts. This case law is consistent with the Colonial stream obstruction acts and the general survey of Virginia, and further demonstrates that the statutory intent of "rivers and creeks" was consistent with the generally accepted geographic meaning. Concisely put, the "rivers and creeks" include both the navigable and floatable watercourses and the non-navigable, non-floatable watercourses of commensurate physical size, i.e., drainage area and average flow.¹⁹⁰ The common lands acts include streams upstream to at least that point with a drainage area of twenty-seven square miles

¹⁸⁷ *Id.* at 204, 213.

¹⁸⁸ *Id.* at 202-04, 216.

¹⁸⁹ *Garden Club of Va. v. Va. Public Service Co.*, 153 Va. 659, 674, 669-70 (1930).

¹⁹⁰ *Accord Boerner*, 89 S.E.2d at 26-27. This 1955 decision of the Virginia Court considered the ownership of the bed the Jackson River in Allegheny County, at a point upstream of the City of Covington (drainage area apprx. 410 sq. miles), which the Court found was neither navigable nor floatable. The Court suggests that the River could be within that category of watercourses subject to the 1780 and 1802 common lands acts but held that the Colonial patents preceded these acts and that the bed belonged to the riparian landowner.

but do not include those smaller “runs” which, by reason of their relatively small flow and breadth, are not navigable or floatable.

F. The Mill Acts and the Designation of Watercourses as Public Highways

How are the “rivers and creeks” reserved in public ownership to be identified? The case law, statutes and other authority discussed above do not define the upstream limits of these public rights. But the regulation of the conflicting interests of mill-dams and navigation pursuant to the Virginia and West Virginia Mill Acts provides the best evidence of the historical upstream limits of the “rivers and creeks.” Water-power was essential to economic development in antebellum Virginia, and the “Mill Acts” were enacted to facilitate its development.¹⁹¹ Water-powered machinery was considered a great public benefit and a suitable “mill seat” was valuable property to be developed, if necessary, using governmental authority.¹⁹² In 1667, the General Assembly enacted “An Act for Encouragement of Erecting Mills” which authorized the county (fiscal) courts, upon application by the owner of land on one side of some “convenient place,” to condemn one (1) acre of land on the opposing side for the erection of a mill and dam.¹⁹³ There was no specific reference to any watercourse, but the 1705 revision refers to any “convenient run.”¹⁹⁴ The 1745 revisions required the prior authorization of the county court for the erection of a mill on any “creek or run” but did not protect navigation or other public uses.¹⁹⁵

The conflicts between navigation and free passage of fish and the economic benefits of water-powered machinery became increasingly problematic as settlement proceeded westward across Virginia and up the smaller streams. Beginning in 1745, the General Assembly enacted statutes for a few specific streams, including the South Branch Potomac River, requiring either the removal of mill-dams or the installation of “slopes” (sluices)¹⁹⁶ to accommodate navigation and the passage of fish and, in some instances, locks for larger watercraft unsuited to

¹⁹¹ Staples, *The Mill Acts*, IX VA. L. REGISTER, 265 (1903).

¹⁹² *Stokes & Smith*, 30 Va. (3 Leigh) at 335. *Crenshaw*, 27 Va. (6 Rand.) at 294.

¹⁹³ 2 Va. Henning's Stat. 260 (1667).

¹⁹⁴ 3 Va. Henning's Stat. 401, § I (1705).

¹⁹⁵ 5 Va. Henning's Stat. 359, § III (1745). The county court was to determine whether adjacent lands would be overflowed or otherwise affected, and whether it could convene a jury to assess resulting damages against the mill owner and could approve or deny the petition in its discretion.

¹⁹⁶ A “slope” was a sluice through a mill-dam, typically ten to thirty feet wide, with a sloped bench on the downstream side, to accommodate navigation by small boats, rafts and logs and the passage of fish. See *Gaston*, 10 S.E. at 64-5; *Crenshaw*, 27 Va. (6 Rand.) at 297. Many of the later “public highway” statutes prescribed the design of slopes. See, e.g., Act of Jan. 1, 1833, 1833-34 Va. Acts ch.153 (requiring mill-dams in Little Kanawha River to install either locks or, if the dam did not exceed four feet in height, a slope of minimum twenty feet width and forty feet in length with side boards not less than ten inches high).

slopes.¹⁹⁷

In 1785, the Mill Act was fundamentally revised to protect navigation and other public and private interests on “any watercourse” which made it Virginia’s first regulatory program for water resources.¹⁹⁸ A mill-dam applicant filed a writ of *ad quad damnum* with the county (fiscal) court which empaneled twelve (12) jurors to conduct an inquest to determine, *inter alia*, “in what degree fish of passage and ordinary navigation will be obstructed... and whether in their opinion the health of the neighbors will be annoyed by the stagnation of waters.”¹⁹⁹ The court was required to deny the application if the inquest found that public health would be impaired or a residence or certain other property inundated, but it otherwise had discretion to authorize or deny the mill-dam application.²⁰⁰ The county court was required to impose appropriate conditions i.e., slopes (sluices) and/or locks, if the inquest found the mill-dam would obstruct “ordinary navigation”²⁰¹ or the passage of fish.²⁰²

But despite the 1785 Mill Act revisions, which charged the county courts to protect navigation, the General Assembly increasingly intervened in the growing conflicts between water-power and navigation on specific rivers. Beginning in 1800 with the Monongahela River,²⁰³ these enactments designated certain streams as a “public highway” and rescinded the power of the county courts to determine whether and how new mill-dams would protect navigation and the passage of fish.²⁰⁴ Hundreds of mills and dams had been built in West Virginia by the mid-19th century, and they became ubiquitous impediments to navigation.²⁰⁵ The failure

¹⁹⁷ *Crenshaw*, 27 Va. (6 Rand.) at 295. Embrey, *supra* note 26, at 171-72. See, e.g., 5 Va. Henning’s Stat. 375 (1745) (discussing the James and Appomattox Rivers). 12 Va. Henning’s Stat. 60-61 (1785) (discussing the South Branch Potomac River).

¹⁹⁸ 12 Va. Henning’s Stat. 187 (1785).

¹⁹⁹ *Id.* at 188. The inquest was required to evaluate the effects of a proposed mill-dam upon “ordinary navigation”, passage of fish and public health and the failure to do so rendered it defective. See *Watts v. Norfolk & W. R. Co.*, 39 W.Va. 196, 209-210 (1894); *Kownslar v. Ward*, 21 Va. (1 Gilmer) 127 (1820).

²⁰⁰ 12 Va. Henning’s Stat. 188 (1785); *Mayo v. Turner*, 15 Va. (1 Munsf.) 405 (1810).

²⁰¹ In the Mill Act, “ordinary navigation” included only established and regular navigable use. *Crenshaw*, 27 Va. (6 Rand.) at 291.

²⁰² 12 Va. Henning’s Stat. 188 (1785). *Stokes & Smith*, 30 Va. (3 Leigh) at 340. *Anthony v. Lawhorne*, 28 Va. (1 Leigh) 9,13 (1829); *Crenshaw*, 27 Va. (6 Rand.) at 291. See also *Gaston*, 10 S.E. at 64-5.

²⁰³ See, e.g., Act of Jan 20, 1800, 1799-1800 Va. Acts ch.57 (Act of January 20, 1800 designating the “Monongalia” River (later “Monongahela”) and certain tributaries as “public highways” and requiring locks or slopes in all existing and future mill-dams).

²⁰⁴ *Crenshaw*, 27 Va. (6 Rand.) at 295, 297. See *Harrison Justices v. Holland*, 44 Va. (3 Gratt.) 247, 247-48 (1846); *Stokes & Smith*, 30 Va. (3 Leigh) at 335.

²⁰⁵ R. CLARKSON, TUMULT ON THE MOUNTAINS: LUMBERING IN WEST VIRGINIA, 1770-1920, 17 (1964). D. DAVIS, HISTORY OF HARRISON COUNTY, 674 (1970) (seventy-five water mills and dams were built in Harrison Co., W.Va.). PRESTON COUNTY HISTORICAL SOCIETY, HISTORY OF PRESTON COUNTY 12-

of the county courts to protect navigation, and the need for consistent navigation policy, were the principal motivation for the public highway statutes.²⁰⁶ The 1785 Mill Act and its subsequent revisions continued these public highway designations until 1931 when the West Virginia Legislature extended such protection to all navigable and floatable watercourses.²⁰⁷ Today, the Mill Act remains in effect under the jurisdiction of the West Virginia Division of Natural Resources.²⁰⁸

Between 1800 and the 1870's, the Virginia General Assembly and West Virginia Legislature designated over seventy (70) "public highways" within contemporary West Virginia.²⁰⁹ Typically, these statutes would designate the stream a "public highway for all purposes of navigation, free for such boats and rafts as usually navigate" from its mouth upstream to a specific location and fix the maximum height of mill-dams and/or the dimensions of the required slopes.²¹⁰ The public highway statutes encompassed both navigable and floatable watercourses as defined by subsequent case law in the late 19th century. The U.S. Army Corps of Engineers has frequently relied upon the public highway statutes in determining the upstream limits of navigable waters in Virginia for purposes of agency jurisdiction.²¹¹ But some public highway designations for very small streams (with watersheds less than twenty square miles) only referred to the "transportation of timber, saw-logs, staves and lumber."²¹² The public highways statutes included many large streams such as the Cheat, Elk, Gauley and Greenbrier Rivers. But the majority of these "public highways" were relatively small watercourses and typically extended public highway status upstream to points with watersheds of less than thirty (30) square miles and, on several streams, between five (5) and seven (7) square miles.²¹³

13 (1979) (approximately, fifty mills and dams were built in Preston Co., W.Va.).

²⁰⁶ I.F. Boughter, *Internal Improvements in Northeastern Virginia: A Study of State Policy Prior to the Civil War* 105 (1930) (unpublished Ph.D. thesis, University of Pittsburgh).

²⁰⁷ 12 Va. Hening's Stat. 189 (1785); 1 Shep. 137, § 13 (1792); VA. CODE ch. 235, § 22 (1819). The term "public highway" was not expressly incorporated into the Virginia Mill Act until 1849. VA. CODE ch. 62, § 6 (1849). The term "public highway" was used in the West Virginia Mill Act until 1931 when all dams and other obstructions in navigable and floatable watercourses were required to protect navigation, floatage and passage of fish. W.VA. CODE §64, § 27 (1868); W.VA. CODE ch. 44, § 27 (1870); W.VA. CODE § 1543 (1906); W.VA. CODE § 61-3-47 (1931) (Reviser's Note).

²⁰⁸ See *infra* text accompanying notes 356-60.

²⁰⁹ See *infra* Appendix A.

²¹⁰ E.g., Greenbrier River declared a public highway upstream to its forks with mill-dams limited to four foot (4 ft.) maximum height and minimum thirty foot (30 ft.) wide slopes required. Act of Feb. 13, 1838, 1838 Va. Acts ch. 209. Act of Mar. 6, 1841, 1840 Va. Acts ch. 85. See generally *infra* Appendix A.

²¹¹ 33 C.F.R. § 329.14 (1998). See *infra* note 291.

²¹² See, e.g., Act of Feb. 29, 1868, 1868 W. Va. Acts 86 (discussing certain tributaries of Fishing Creek in Wetzel County).

²¹³ See *infra* Appendix A.

The Mill Act applied to all “watercourses” including the “rivers and creeks” reserved by the 1780 and 1802 common lands acts and the smaller “runs” not subject to public reservation.²¹⁴ Since “rivers and creeks” included all that were navigable or floatable, the public highway statutes provide the best legislative authority of the upper limits of the statutory reservation. This authority supports the conclusion that the public reservation reaches upstream to a point with a five (5) to seven (7) square mile watershed.

G. County Court Orders Under the Mill Act

The abundance of orders issued by the county courts upon mill-dam applications after 1785 can provide very significant guidance in applying the 1780 and 1802 Acts.²¹⁵ The 1785 Mill Act required that the bed of the watercourse be owned by either the mill-dam applicant or the Commonwealth.²¹⁶ In 1807, this provision was modified to require that the applicant own only one-half of the bed, to the middle of the stream, or the Commonwealth the whole bed.²¹⁷ Where the applicant owned the land on both sides, it was presumed that he owned the bed for purposes of a mill-dam application and the county court did not address the question of title.²¹⁸ But where the applicant owned only one side of the stream, a finding in the record was required that either the applicant or the Commonwealth owned the bed.²¹⁹ As a function of local practice, these findings may be set forth in either the inquest of the jury, or the county court order granting or denying the application, or both.²²⁰

The 1780 Act reserved public ownership of only those eastern waters “used as common” which effectively meant established navigation. The county court orders issued under the Mill Act are a very significant resource for determin-

²¹⁴ 12 Va. Hening’s Stat. 82, § 1 (1785). *Wroe v. Harris*, 2 Va. (2 Wash.) 126 (1795) (discussing whether mill applicant was owner of the “bed of the run”).

²¹⁵ Unlike Virginia, the 1868 enactment of the West Virginia Mill Act authorized the county courts to designate streams as public highways until 1931. W. VA. CODE § 44, § 27 (1931) W.VA. CODE § 61-3-47 (1931) (Reviser’s Note).

²¹⁶ 12 Va. Hening’s stat. 82, § 1 (1785). *Wroe*, 2 Va. (2 Wash.) at 128.

²¹⁷ 3 Shep. 297 (1807); *Mead*, 24 Va. (3 Rand.) at 37-38. The bed ownership requirement was rescinded in 1849. VA. CODE ch. 63, § 1 (1849). The West Virginia Mill Act never included a bed ownership requirement. W.VA. CODE ch. 44, § 29 (1868).

²¹⁸ *Mairs v. Gallahue*, 50 Va. (9 Gratt.) 94 (1852); *Wroe*, 2 Va. (2 Wash.) at 128.

²¹⁹ *Martin v. Beverly*, 9 Va. (5 Call) 444 (1805). See also *Whitworth v. Puckett*, 43 Va. (2 Gratt.) 528, 530-31 (1846); *Wroe*, 2 Va. (2 Wash.) at 128.

²²⁰ Mill Act orders are generally recorded in the order books of the county courts which were predecessors of the contemporary county commissions (1974 to present). These county fiscal bodies were designated as county boards of supervisors from 1863 to 1872. The inquests conducted by juries pursuant to the writ of *ad quad damnum* may be recorded in either the county court order books or the records of the county sheriff.

ing such common use and thereby public ownership. Those county court orders on the eastern waters which found the streambed was vested in the Commonwealth (for post-1780 patents) necessarily required a determination of prior common use.²²¹ Orders requiring slopes, locks or other measures to protect navigation also evidence common use, but the evidentiary value may be a function of the degree to which the application was contemporary with the 1780 Act and the diligence of the county court in protecting navigation.²²²

H. *Benchmarks for Identifying "Rivers and Creeks" Under the 1780 and 1802 Acts*

On the western waters, the 1802 Act reserved as common lands all "rivers and creeks" which remained ungranted on January 15, 1802 regardless of whether they were navigable, floatable or non-floatable. However, on the eastern waters, the public reservation is significantly attenuated since the 1780 Act reserved only those rivers and creeks which remained ungranted in May, 1780 and were "used as common." Since common use on non-tidal waters effectively means navigation, the common lands on the eastern waters are generally limited to the navigable or floatable streams actually utilized for transportation in the late 18th century. The historical records indicate that by 1780 the lands along most of these navigable and floatable streams were extensively settled and the streams probably subject to established navigation. But in contrast to the western waters, the eastern waters reserved in public ownership will generally exclude non-floatable streams since other common uses, e.g. public fishing shores, were rare on non-tidal Virginia waters.

The legal and historical authority discussed above characterize the "rivers and creeks" as being of such seasonal flow and physical dimensions as necessary for transportation during the colonial and antebellum periods. In this regard, the statutory term is commensurate with the subsequent common law concepts of navigable and floatable streams. But "rivers and creeks" also includes those streams of similar magnitude which, by reason of natural obstructions or high gradient, would not have been utilized for navigation or floatage.²²³ Therefore, the statutory term "rivers and creeks" encompassed any watercourses with a drainage area greater than seven square miles (7.0 sq. mi.) regardless of gradient or other physical characteristics which may obstruct navigation or floatage.

The historical record, particularly the "public highway" statutes, suggests that smaller streams were considered floatable and may be subject to public owner-

²²¹ *Mead*, 24 Va. (3 Rand.) at 36.

²²² *Loving v. Alexander*, 745 F.2d 861, 866 (4th Cir. 1984); *Campbell, Brown*, 93 S.E.2d at 263; *Crenshaw*, 27 Va. (6 Rand.) at 283. See *Gaston*, 10 S.E. at 64-66. County courts frequently failed to protect navigation from obstruction by mill-dams. See *supra* text accompanying notes 203-06.

²²³ *Garden Club of Va.*, 153 Va. at 674, 669-70 (affirming the decision of the State Corporation Commission in the "Goshen Pass Case" where the Commission found that the 1780 Act reference to "rivers and creeks" included non-navigable and non-floatable streams). See *Mead*, 24 Va. (3 Rand.) at 36.

ship. The West Virginia Public Land Corporation provides no guidance on this issue. But the Virginia Marine Resources Commission (VMRC), vested with title to both tidal and non-tidal beds in the Commonwealth, has adopted a five square mile (5.0 sq. mi.) criteria for determining public ownership under the 1780 and 1802 Acts. Administratively, at the recommendation of the Attorney General of Virginia, VMRC assumes that all riparian lands are subject to the 1780 and 1802 Acts and that ownership of all "rivers and creeks" is vested in the Commonwealth unless the riparian landowner can prove that his title originates prior to these Acts. Further, VMRC assumes that all the "rivers and creeks" on the eastern waters were "used as common" and thereby subject to public reservation if not granted prior to the 1780 Act.²²⁴

V. NAVIGABLE AND FLOATABLE WATERCOURSES AT COMMON LAW

A. Generally

The common law of West Virginia distinguishes between navigable, floatable and non-floatable watercourses. The extent and nature of public rights therein will vary depending on this classification. The term "navigable" has significantly different meanings depending on whether the context is the federal navigational servitude under the Commerce Clause, the admiralty jurisdiction of the federal courts, water pollution control under federal and state environmental regulatory statutes or the determination of streambed title and public rights under state common law.²²⁵ Floatable watercourses are exclusively creatures of state common law. The courts make the final determination of whether a stream is navigable²²⁶ or floatable.²²⁷ A court may take judicial notice that a non-tidal watercourse is navigable, when such use is a matter of common knowledge, but not of floatable streams.²²⁸ Otherwise, the burden of proof to establish navigable or floatable status over a private bed is upon the person claiming the benefit of such use.²²⁹

²²⁴ VA. CODE § 28.2-1200 (1995). 1981-82 Op. Va. Att'y Gen. 242 (1982). Letter from Tony Watkinson, Virginia Marine Resources Commission, to Larry W. George (November 20, 1997) (Commission has administratively adopted a standard of five square miles or an average flow of five c.f.s. for public ownership. Commission recognizes that smaller streams may be also be in public ownership).

²²⁵ See John F. Baughman, *Balancing Commerce, History, and Geography: Defining the Navigable Waters of the United States*, 90 MICH. L. REV. 1028 (1992). FARNHAM, *supra* note 2, at § 30.01(d)(2).

²²⁶ U.S. v. Appalachian Electric Power Co., 311 U.S. 377, 404 (1940); *Campbell, Brown*, 93 S.E.2d at 261. See *Burner*, 87 S.E. at 361.

²²⁷ FARNHAM, *supra* note 2, at § 26. See also *Burner*, 87 S.E. at 361; *Gaston*, 10 S.E. at 63-64, 65-66.

²²⁸ *Burner*, 87 S.E. at 361. FARNHAM, *supra* note 2, at § 26.

²²⁹ *Id.* See also *Gaston*, 10 S.E. at 63.

B. Navigable Waters

In *Campbell, Brown & Co. v. Elkins*,²³⁰ the West Virginia Supreme Court adopted the same definition of navigable waters for state law purposes as that adopted by the United States Supreme Court for the federal navigational servitude under the Commerce Clause.²³¹ Both Courts define a “navigable” watercourse as one capable of valuable use by the public on at least a seasonal basis by watercraft historically or customarily used in commercial trade and transport.²³² This is also the general rule in other states.²³³ In West Virginia, a stream susceptible to use by “boats or lighters” (flat-bottom barges) for “such length of time during the year as will make such stream valuable to the public as a public highway” is navigable.²³⁴ In *Campbell, Brown*, the use of eighty-one miles of the Guyandotte River from Logan to its mouth by “canoes” and “pushboats” during the first half of the 19th century evidenced such navigable status.²³⁵ Navigable status is immutable and is not defeated by a lack of historical use (or at least a lack of historical records of such use) or the cessation of navigation.²³⁶ Such navigable status is not diminished by the existence of intermittent natural obstructions to passage of watercraft or the necessity for improvements in aid of navigation.²³⁷

There are no Virginia cases prior to the creation of West Virginia which define navigable waters. But early Virginia cases²³⁸ acknowledge that navigable waters were used by “batteaux”²³⁹ (the most common inland watercraft) and the

²³⁰ 93 S.E.2d 248.

²³¹ *Campbell, Brown*, 93 S.E.2d at 261-62. By reason of the federal navigation servitude, the navigability of a given stream is a federal question subject to final adjudication in the federal courts and is not subject to local rules. *Holt State Bank*, 270 U.S. at 55-56.

²³² *Appalachian Electric*, 311 U.S. at 407-10; *Campbell, Brown*, 93 S.E.2d at 261-62.

²³³ FARNHAM, *supra* note 2 at § 23.

²³⁴ *Gaston*, 10 S.E. at 62-63.

²³⁵ *Campbell, Brown*, 93 S.E.2d at 265 (“Pushboats” were 8 to 12 feet wide, 50 to 80 feet long and carried up to 18,000 pounds of freight. “Canoes” were 28-30 feet long and carried approximately 3,000 pounds of freight.).

²³⁶ *Appalachian Electric*, 311 U.S. at 408-09, 416; *Loving*, 745 F.2d. at 864-65 (sustaining a Corps of Engineers determination that the Jackson River in Allegheny County, Va. was a navigable stream); *Campbell, Brown*, 93 S.E.2d at 261-62; *Gaston*, 10 S.E. at 65-66.

²³⁷ *Appalachian Electric*, 311 U.S. at 407-10; *Loving*, 745 F.2d. at 865; *Campbell, Brown*, 93 S.E.2d at 261-62.

²³⁸ *Crenshaw*, 27 Va. (6 Rand.) at 273; *Home*, 8 Va. (4 Call) at 762.

²³⁹ Batteaux were the most common commercial watercraft used in the antebellum period on non-tidal Virginia rivers and were generally forty-five (45) feet in length, six to eight (6-8) feet in width with a draft of two (2) feet or less. B.G. TERRELL, EAST CAROLINA UNIVERSITY PROGRAM IN MARITIME HISTORY, THE JAMES RIVER BATTEAUX: TOBACCO TRANSPORT IN UPLAND VIRGINIA, 1745-1840, 49-75 (1992). See, JEFFERSON, *supra* note 40, at 22-25, 30-32.

1819 revisions of the Mill Act protected the "passage of vessels, batteaux, or canoes"²⁴⁰ from obstruction by mill-dams.²⁴¹

The Army Corps of Engineers has promulgated regulations, for the purposes of its regulatory jurisdiction to protect navigable waters, which provide more specific guidance based on federal case law and the federal navigational servitude.²⁴² Although navigability is a judicial question, both the federal and West Virginia courts have given "substantial weight" to Corps determinations of navigability.²⁴³ The Corps regulations provide that "historical use of canoes, bateaux, or other frontier craft, as long as that type of boat was common or well-suited to the place and period" or the commercial transport of logs will evidence navigable status.²⁴⁴ Navigability is not defeated by "obstructions which were [or may have been] overcome by [such watercraft by the use of] portages", artificial chutes or other navigational improvements.²⁴⁵ "The upper limit[s] [of navigability may be at a] point traditionally recognized as the head of navigation [(major falls or rapid) or] may [extend] farther upstream".²⁴⁶

C. *Floatable Waters*

A "floatable" watercourse is generally smaller and may have a steeper gradient than navigable watercourses and is non-navigable under state and federal law. Such streams are purely creatures of state common law and are recognized as a distinct category in most states.²⁴⁷ The concept of floatable waters, which evolved during the 19th century, was unknown during the colonial and early antebellum period, and it appears that the larger floatable streams were then considered as navigable waters.²⁴⁸ In the leading 1889 decision on floatable watercourses, *Gaston*

²⁴⁰ During the antebellum period, "canoes" in eastern Virginia were watercraft approximately sixteen to twenty feet in length with a draft of six (6) inches. JAMES RIVER BATTEAUX: TOBACCO TRANSPORT IN UPLAND VIRGINIA, 1745-1840, at 49-75. Compare with larger "canoes" used on Guyandotte River in western Virginia. *Supra* note 235.

²⁴¹ See VA. CODE ANN. ch. 235, § 21 (Michie 1819).

²⁴² 33 C.F.R. § 329 (1998) (Corps of Engineers regulatory definition of "navigable waters of the United States").

²⁴³ See *Loving v. Alexander*, 548 F.Supp. 1079, 1087 (W.D. Va. 1982), *affd.* 745 F.2d 861 (4th Cir. 1984); *Hartman v. United States*, 522 F.Supp. 114, 117 (D.S.C. 1981); *Campbell, Brown*, 93 S.E.2d at 264. See *Appalachian Electric Power Co.*, 23 F.Supp. at 95 ("The Annual Reports of the Chief of Engineers . . . are of great value in determining the character and extent of navigation . . .").

²⁴⁴ 33 C.F.R. § 329.6(a) (1998).

²⁴⁵ 33 C.F.R. § 329.10 (1998); See generally 33 C.F.R. § 329.8 (b) (1998), § 329.9 (b) (1998).

²⁴⁶ 33 C.F.R. § 329.11(b)(1998).

²⁴⁷ See 1 WATERS AND WATER RIGHTS, *supra* note 3, § 32; See FARNHAM, *supra* note 2, at § 25.

²⁴⁸ See *Gaston*, 10 S.E. at 63; *Infra* text accompanying note 261.

v. *Mace*, the West Virginia Supreme Court considered whether Stonecoal Creek in Lewis County was a floatable watercourse at the Gaston Mill-dam — a point at which this relatively small stream has a drainage area of twenty-seven (27) square miles.²⁴⁹ The *Gaston* Court held that floatable watercourses were those capable of “floating logs and other products of forests, mines and tillage down [them] to mills and market”²⁵⁰ and that Stonecoal Creek at the Gaston Mill was such a stream.²⁵¹

Seven years later, in *State v. Elk Island Boom Company*, the Court provided further guidance in specifying that floatable watercourses were those passable by “floating logs, rafts, timber, boats, . . . canoes, push boats, and like craft . . .”²⁵² The *Elk Island* Court also observed that a “floatable stream [would include those] capable of being used to float logs, rafts and other timber only when the water is up.”²⁵³ Floatable streams are not passable for batteaux, lighters (barges) and larger boats customarily used in commercial transport.²⁵⁴ They need only be floatable on a seasonal basis when increased precipitation occurs with such reasonable certainty as to sustain a sufficient flow for transportation related to commercial purposes.²⁵⁵ Only a capacity for downstream passage is necessary.²⁵⁶ But the right of floatage, absent public ownership of the streambed, is only “a right of passage and includes only such rights as are incident to” and reasonably necessary for that purpose.²⁵⁷ Unlike navigable waters, which also encompass those which have been or may be made navigable by reasonable improvement, floatable waters encompass only those subject to such use in their natural condition.²⁵⁸

VI. IDENTIFYING NAVIGABLE AND FLOATABLE WATERCOURSES

A. Early River Surveys in Trans-Allegheny Virginia

The first significant investigation of West Virginia’s rivers was conducted

²⁴⁹ *Supra* note 181-183.

²⁵⁰ *Gaston*, 10 S.E. at 63. Floatable streams may also be used for recreational boating. 1 WATERS AND WATER RIGHTS, *supra* note 3, § 32.03.

²⁵¹ *See Gaston*, 10 S.E. at 66.

²⁵² *State v. Elk Island Boom Co.*, 24 S.E. 590, 591 (W. Va. 1896).

²⁵³ *See id.*

²⁵⁴ *See Gaston*, 10 S.E. at 63; *See Burner v. Nutter*, 87 S.E. 359, 361 (W.Va. 1915); *See Elk Island*, 24 S.E. at 591.

²⁵⁵ *See Gaston*, 10 S.E. at 63; *See Hot Springs Lumber & Mfg. Co. v. Revercomb*, 55 S.E. 580, 582-83 (Va. 1906).

²⁵⁶ *Hot Springs Lumber*, 55 S.E. at 582 (quoting FARNHAM, § 25); *See Gaston*, 10 S.E. at 63, 64.

²⁵⁷ *Hot Springs Lumber*, 55 S.E. at 582 (quoting FARNHAM, § 25); *See Gaston*, 10 S.E. at 63.

²⁵⁸ *See id.*

in 1784 by George Washington for the purpose of linking the uppermost navigable points of the eastern and western waters by canal or turnpike. The project was General Washington's passion, intended to improve tidewater Virginia's trade with the Ohio Valley, and was among his first private endeavors after the Revolutionary War.²⁵⁹ He inspected the "Monongalia," Cheat, North Branch Potomac and Tygart Rivers and several Potomac tributaries which he determined to be navigable.²⁶⁰ Washington determined the North Branch Potomac was navigable upstream to a point with a watershed of sixty-two square miles but generally did not provide such detail for the other rivers.²⁶¹

Despite Washington's recommendations for a comprehensive western waters survey, it was not until 1812 that the General Assembly appointed several commissioners for the first governmental survey in a similar effort to link the eastern and western waters but along a more southerly route.²⁶² As a service to his native state, and motivated by Washington's earlier work, United States Supreme Court Chief Justice John Marshall agreed to lead the survey which included navigating the Greenbriar, New, and Kanawha Rivers by boat.²⁶³ Chief Justice Marshall and his fellow commissioners found the lower Greenbriar was navigable and that "the New River may be relied on with certainty, for the transportation of articles from east to west" but noted that in the New River Gorge the "difficulties were great, and deserve to be seriously considered."²⁶⁴ Today, the 1812 survey course is included in the New River Gorge National River and is renowned for recreational whitewater rafting.

The Washington and Marshall surveys provide significant insight into the nature of historically navigable waters but offer little specific guidance. However, numerous nineteenth century navigation surveys by the Virginia Board of Public Works and the Army Corps of Engineers provide ample quantitative guidance as to

²⁵⁹ See 4 THE DIARIES OF GEORGE WASHINGTON, 1784-JUNE 1786, *supra* note 65, at 4-6; See Rice, Internal Improvements in Virginia, 1775-1860, *supra* note 60, at 65-69.

²⁶⁰ See 4 THE DIARIES OF GEORGE WASHINGTON, 1784-JUNE 1786, *supra* note 65, at 32-33, 38-41, 58-59. General Washington also found several Potomac River tributaries to be navigable: South Branch, Patterson Creek, Cacapon River, Opequon Creek. See *id.* at 59-60. After his survey, Washington recommended public improvement of the James and Potomac Rivers which the General Assembly authorized in 1785. Washington also recommended a comprehensive state survey of the western waters but no action was taken. See Rice, Internal Improvements in Virginia, 1775-1860, *supra* note 60, at 66-67.

²⁶¹ DIARIES, *supra* note 65, at 11-12, 49 n.7 (North Branch is navigable upstream to "McCullough's path crossing" - present site of Gorman, W.Va.).

²⁶² 1812 Va. Acts ch. 37.

²⁶³ L. BAKER, JOHN MARSHALL: A LIFE IN THE LAW 521-22 (1974).

²⁶⁴ John Marshall, et al., *Report of the Commissioners Appointed to View Certain Rivers within the Commonwealth of Virginia*, VA. GEN. ASSEMBLY, J. OF THE HOUSE OF DELEGATES at 3-5 (1812) (reprinted in VA. GEN. ASSEMBLY, J. OF THE HOUSE OF DELEGATES (1828-29)). The Commissioners recommended sluices at most rapids and locks and short canals around Brooks Falls, Great Falls of the New (Sandstone Falls) and Great Falls of the Kanawha. *Id.* at 5.

the upper limits of drainage area and gradient of navigable waters.

B. Navigation Surveys by the Virginia Board of Public Works, 1817-1839

An 1815 General Assembly study declared that navigable rivers were essential to Virginia's economic development and recommended the creation of a state agency for "rendering navigable the principal rivers; of more intimately connecting, by public highways, the eastern and western waters and the market towns of the Commonwealth."²⁶⁵ The Virginia Board of Public Works ("VBPW") was created in 1816 to, among other purposes, survey and improve navigable rivers.²⁶⁶ Between 1817 and the late 1830's, the Board of Public Works completed over fifteen navigation surveys within contemporary West Virginia.²⁶⁷ Although navigability is a judicial question, the surveys of the Board of Public Works are given substantial weight on this question.²⁶⁸ The United States Army Corps of Engineers has frequently relied upon VBPW surveys in determining the upstream limits of navigable waters in Virginia for purposes of agency jurisdiction.²⁶⁹

Many VBPW surveys focused on the lower sections of the larger navigable rivers, such as the Elk, Greenbriar, Kanawha, New, South Branch Potomac, and did not necessarily define the physical characteristics of the upper limits of historical navigation. But the VBPW surveys of smaller streams, such as the West Fork of "Monongalia" (later "Monongahela") and Little Kanawha Rivers, indicate that the upper limits of navigability extended to watersheds in the range of 130 to 160 square miles.²⁷⁰ In VBPW surveys, the average gradient (fall per mile) of navigable waters was usually less than twelve feet per mile (12 f.p.m.), but short sections could have a steeper gradient.²⁷¹

²⁶⁵ *Report of Committee on Roads and Internal Navigation*, VA. GEN. ASSEMBLY, J. OF THE HOUSE OF DELEGATES, at 45-49, 54-56, (1816).

²⁶⁶ 1819 Va. Acts ch. 228.

²⁶⁷ See generally ANN. REP. OF THE VA. BOARD OF PUB. WORKS (1817-1840).

²⁶⁸ See *Campbell, Brown*, 93 S.E.2d at 263; *James River & K. Co. v. Early*, 54 Va. (13 Gratt.) 540, 557 (1858).

²⁶⁹ 33 C.F.R. § 329.14 (1998); see *infra* note 293 and accompanying text.

²⁷⁰ *Survey of Monongalia River*, 5 ANN. REP. OF VA. BOARD OF PUB. WORKS, at 34-35 (1820) (West Fork is navigable to Stonecoal Creek (Weston, W.Va.) with minimum 162 sq. mile drainage area); *Survey of Little Kanawha River*, 6 ANN. REP. OF VA. BOARD OF PUB. WORKS, at 34-38 (1821) (navigable up to Bulltown (inundated by Burnsville Reservoir) with minimum 133 sq. mile watershed). Other streams with smaller watersheds were found non-navigable. See, e.g., *Survey of Howards Creek*, 4 ANN. REP. OF THE BOARD OF PUB. WORKS, at 11 (1819) (91 sq. mile watershed in Greenbriar Co.).

²⁷¹ See, e.g., *Survey of South Branch Potomac River*, 8 ANN. REP. OF VA. BOARD OF PUB. WORKS, at 120-121 (1823) (fall is 8.1 feet per mile (f.p.m.) in vicinity of Moorefield, W.Va.); *Survey of North Branch and Potomac*, 5 ANN. REP. OF VA. BOARD OF PUB. WORKS, at 46-55 (1820) (fall between New Creek and Cumberland is 11.5 f.p.m. but increases to 24 f.p.m. for eight mile section from Savage River downstream to New Creek). The Jackson River watershed in Allegheny Co., Va. is adjacent to West Virginia and provides

C. *The Navigation Companies, 1785-1905*

The improvement²⁷² of western Virginia's navigable rivers was accomplished principally by legislatively chartered public-private navigation companies, under VBPW supervision, which were authorized to charge tolls.²⁷³ Legislation chartering these companies was commonly preceded by a VBPW river survey to determine feasibility.²⁷⁴ The authorization of such navigation companies was a legislative declaration of navigability.²⁷⁵ As early as 1785, but principally after the creation of VBPW in 1816, the General Assembly chartered over fifteen navigation companies within contemporary West Virginia on larger rivers such as the Cheat, Coal, Little Kanawha and New Rivers and also smaller streams.²⁷⁶ The last of these companies, Coal River Navigation Company and Little Kanawha Navigation Company, operated until 1881 and 1905, respectively.²⁷⁷ As in the case of the VBPW river surveys, the legislation chartering several navigation companies authorized them to improve navigation upstream to points with watersheds in the range of 130 to 160 square miles.²⁷⁸

The new State of West Virginia authorized only a few navigation companies, without public financing, because internal improvement policy then empha-

similar guidance. *Survey of Jackson River*, 1 ANN. REP. OF VA. BOARD OF PUB. WORKS, at 54-56 (1817) (24 mile section from Cowpasture River upstream to Dunlap Creek (Covington, Va.) is navigable with average fall of 9.75 f.p.m., several sections at 12 f.p.m. and a one mile section at 23 f.p.m.).

²⁷² Early nineteenth century methods of improving navigable rivers included removing obstructions, sluices through falls, channels in shoals, guide walls and "wing dams" to collect the flow, moorings and windlasses to raise and lower watercraft through rapids and locks, dams and/or short canals. *James River & K. Co.*, 54 Va. (13 Gratt.) at 542; see also *Report of Committee on Roads and Internal Navigation*, VA. GEN. ASSEMBLY, J. OF THE HOUSE OF DELEGATES, at 42 (1815); see generally ANN. REP. OF VA. BOARD OF PUB. WORKS (1817-1860); see generally VA. CANALS & NAVIGATIONS SOCIETY, SHENANDOAH RIVER ATLAS (1997); VA. CANALS & NAVIGATIONS SOCIETY, THE RIVANNA SCENIC RIVER ATLAS: HISTORIC SITES ON THE RIVANNA NAVIGATION (1992); VA. CANALS & NAVIGATIONS SOCIETY, THE MAURY RIVER ATLAS: HISTORIC SITES ON THE NORTH RIVER NAVIGATION (1991).

²⁷³ 1819 Va. Acts ch. 228. The VBPW, when authorized by the General Assembly, could purchase stock in the "internal improvement companies" for improvement of navigable rivers and construction of turnpikes. Typically, VBPW acquired two-fifths of the outstanding shares but the Assembly occasionally authorized three-fifths thereof. See generally ANN. REP. OF VA. BOARD OF PUB. WORKS (1817-60).

²⁷⁴ *Campbell, Brown*, 93 S.E.2d at 263; *James River and K. Co.*, 54 Va. (13 Gratt.) at 542-3, 557. See generally ANN. REP. OF VA. BOARD OF PUB. WORKS (1817-60).

²⁷⁵ *Campbell, Brown*, 93 S.E.2d at 263. The 1815 Mill Act revisions prohibited any mill-dam or other obstruction in a river on which a navigation company was authorized by the General Assembly. 1819 Va. Acts ch. 253, § 22 (1819).

²⁷⁶ See *infra* Appendix B; L. SYPOLT & E. KEMP, W.VA. U. INSTITUTE FOR THE HISTORY OF TECHNOLOGY AND INDUSTRIAL ARCHAEOLOGY, THE LITTLE KANAWHA NAVIGATION (1991).

²⁷⁷ See SYPOLT & KEMP, *supra* note 276 and accompanying text. W. Dean, *Steamboat Whistles on the Coal*, 32 W. VA. HIST. Q., at 267-78 (1970-71).

²⁷⁸ See *infra* Appendix B (These companies included Little Kanawha Navigation Co., Middle Island Creek Navigation Co., and Monongalia Navigation Co.).

sized railroads over navigation.²⁷⁹ However, the West Virginia Legislature did authorize numerous “boom companies” in the 1870’s which improved both navigable and floatable streams for the transportation of logs and log rafts downstream for capture by a “boom” extending across the watercourse.²⁸⁰ These companies were not authorized to improve navigation for general public use and such “boom company” legislation may manifest a legislative declaration of either navigable or floatable waters.²⁸¹

D. 19th Century Surveys and Open River Navigation System of the U.S. Army Corps of Engineers

In the 1870’s, state government’s role in improving navigation was supplanted by the U.S. Army Corps of Engineers, and the works of the navigation companies were either abandoned or transferred to the federal government.²⁸² The Corps of Engineers conducted a new series of river surveys²⁸³ and established “open river” (free-flowing) navigations which incorporated and even expanded many of the rivers improved by VBPW and the navigation companies.²⁸⁴ From the 1870’s until the early 1900’s, the Corps of Engineers improved navigation and maintained the Elk, upper Little Kanawha, lower Gauley, Guyandotte, New and

²⁷⁹ See *infra* Appendix B; see also *Annual Message of Governor W.E. Stevenson to the Legislature*, W. VA. PUB. DOCUMENTS, at 16-17 (1870) (Railroads are focus of state’s internal improvement policy. Private navigation companies are improving the Little Kanawha and Elk Rivers without public assistance and only the Kanawha River is receiving public funds).

²⁸⁰ See, e.g., 1872 W. Va. Acts 181 (incorporating the “Gauley River Improvement, Manufacturing, Mining and Lumber Co.”). H. F. Jackson, *Boom and Driving Days on Coal River and in the Adirondacks*, 21 W. VA. HIST. Q., at 13-21 (1959-60); E. A. Cubby, *Timbering Operations in the Tug and Guyandotte Valleys in the 1890’s*, 26 W. VA. HIST. Q., at 115-16 (1964-65). In 1877, the Legislature adopted a general boom law providing uniform provisions for the incorporation, purposes and powers of such companies. 1877 W. Va. Acts 121; W. VA. CODE § 31-3-1 to -11; see generally *Elk Island*, 41 W. Va. 796; *Hulings v. Hulings Lumber Co.*, 38 W. Va. 351, 355-56, & 358-59 (1893).

²⁸¹ *Hulings*, 38 W. Va. 351, 355-56, & 358-59.

²⁸² See *supra* note 277 and accompanying text; see also 1881 W. Va. Acts 54 (transferring state-owned navigation works on Kanawha River, formerly owned by James River & Kanawha Co., to U.S. Government).

²⁸³ See, e.g., U.S. Army Corps of Engineers, EXAMINATION AND SURVEY OF NEW RIVER FROM THE MOUTH OF GREENBRIER, W.VA. TO THE LEAD MINES IN WYTHE CO., VA, SENATE EXEC. DOC. NO. 25, 42nd Cong., 3d Sess. (1873) (keel boats navigate 128 mile section carrying two to three tons). Average gradient is 4 ½ f.p.m. but rapids and ledges increase gradient up to 18 f.p.m. at some points. See *id.* U.S. Army Corps of Engineers, PRELIMINARY EXAMINATION OF TYGART’S VALLEY AND BUCKHANNON RIVERS, W.VA. at Appendix AA, 13 ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U.S. WAR DEPT. (1883) (hereinafter cited as “CORPS ANNUAL REPORT”) (Tygart and Buckhannon Rivers are “exclusively rafting streams” above Grafton, W.Va. suitable only for transport of logs). Buckhannon is a rafting watercourse upstream to three forks thereof (44 sq. mi. drainage area) on which some sections exceed fifty f.p.m. See *id.*

²⁸⁴ See generally CORPS ANNUAL REPORTS (1873-1902).

Tug Fork of Big Sandy Rivers as “batteau navigations.”²⁸⁵ During the same period, the Corps of Engineers improved the Buckhannon, Cheat and upper Gauley Rivers as “rafting navigations” (floatable, non-navigable watercourses at common law) for the transport of logs.²⁸⁶ With the exception of the Little Kanawha River, the Corps of Engineers abandoned its open river navigation system in 1902.

Both federal and state courts have held that determinations of navigability by the Corps of Engineers are entitled to substantial weight.²⁸⁷ These 19th century Corps of Engineers surveys and open river improvement projects are generally consistent with the findings of navigability manifested in the earlier VBPW surveys and legislatively chartered Virginia navigation companies. While the Corps of Engineers’ open river system did not include streams as small as the earlier VBPW system,²⁸⁸ the gradient of the “rafting” navigations were greater. The average gradient of navigable streams was less than twelve (12) feet per mile but short sections were as high as eighteen (18) feet per mile.²⁸⁹ However, the “rafting navigations” such as the Gauley River, a floatable watercourse at common law, had an average gradient up to thirty-four (34) feet per mile.²⁹⁰

E. Contemporary Surveys of the Historical Limits of Navigation

During the 1970’s and 1980’s, the Army Corps of Engineers conducted several exhaustive studies of the physical characteristics and upstream limits of historical navigation on streams in the Blue Ridge and Allegheny Mountains of Virginia.²⁹¹ These streams, such as the Jackson and Maury Rivers, have watersheds

²⁸⁵ See *id.* U.S. Army Corps of Engineers, REPORT UPON THE IMPROVEMENT OF RIVERS AND HARBORS IN WHEELING, W.VA. DISTRICT at 631-32, App. FF, CORPS ANNUAL REPORT (1909) (Corps has removed obstructions to navigation on Little Kanawha River above end of slack-water pool at Creston during 1876 to 1908 period). Burnsville, W.Va. is head of navigation on Little Kanawha River with rafting extending upstream. See *id.* LETTER TO SPEAKER OF U.S. HOUSE OF REPRESENTATIVES FROM SECRETARY OF WAR TRANSMITTING A GENERAL PLAN FOR IMPROVEMENT OF KANAWHA RIVER, W.VA., VA. AND N.C. at 20-24, H.R. DOC. NO. 91, 74th Cong., 1st Sess. (February 1, 1935) (Corps of Engineers maintained New River between Hinton, W.Va. and Radford, Va. as an “open river navigation” until 1899. Corps maintained Elk River from Sutton downstream to its mouth as a “bateaux navigation” between 1878 and 1902. Lower twelve miles of Gauley River maintained as a “2-foot navigation for bateaux” and the next 28 miles of the “Roughs” of Gauley River, upstream to Hominy Creek, cleared for transport of logs from 1888 until 1902).

²⁸⁶ See *supra* note 285; see also CORPS ANNUAL REPORT at 1991, 2391 (1891) (Corps of Engineers removed rock obstructions for a “raft navigation” on Cheat River from Rowlesburg, W.Va. downstream to mouth at Pt. Marion, Penn.).

²⁸⁷ *Supra* note 243, at § 23.

²⁸⁸ See *supra* note 285 and accompanying text (the Little Kanawha River upstream to Burnsville (drainage area: 237 sq. miles) was the smallest watershed in the Corps of Engineers open river system).

²⁸⁹ See *supra* note 283; EXAMINATION AND SURVEY OF NEW RIVER at 55-58.

²⁹⁰ See *supra* note 286; CORPS ANNUAL REPORT at 2189, xiii, App. FF (1898) (gradient of Gauley River averages 34 f.p.m. for 28 mile section through “Roughs”).

²⁹¹ The Corps of Engineers conducted these studies to determine the upstream limits of agency juris-

adjacent or in close proximity to West Virginia and are representative of historical navigable use in Trans-Allegheny Virginia (including West Virginia) during the antebellum period. These studies indicate that navigable use proceeded upstream to a point where obstructions, stream gradient or diminishing natural flow (a function of drainage area) precluded further upstream travel. Navigable watercourses generally proceed upstream to that point where average stream gradient exceeded fifteen feet per mile (15 f.p.m.), although sometimes approaching twenty feet per mile (20 f.p.m.) in exceptional circumstances, or the drainage area diminished to a range of 109 to 139 square miles.²⁹²

F. *Benchmarks to Identify Navigable and Floatable Watercourses*

In addition to any historical record of public use, the physical characteristics of a watercourse such as its rate of fall (gradient) and its volume of flow, a function of watershed area, are the principal determinants of whether a stream is navigable or floatable.²⁹³ As a judicial question, such determinations are normally made on a stream-specific basis. However, the case law and the historical record discussed above, particularly the VBPW and Corps of Engineers' surveys, provides an ample basis on which to establish generic physical criteria for the identification of navigable and floatable waters as follows:

(A) *Benchmarks — Navigable Watercourses*: Any watercourse with an upstream drainage area in excess of one hundred and twenty-five square miles (125 sq. mi.) and an average gradient of less than fifteen feet per mile (15 f.p.m.) may be considered a navigable watercourse. Such a watercourse would be considered navigable even if intermittent segments have a significantly higher gradient or are rendered non-navigable by obstructions. In exceptional circumstances, Corps of Engineers' surveys have found smaller streams (e.g., 109 sq. miles) and modestly greater gradients (e.g., 19 f.p.m.) to be navigable.

(B) *Benchmarks — Floatable Watercourses*: Any watercourse with an upstream drainage area in excess of seven square miles (7.0 sq. mi.) and an average

diction over navigable waters pursuant to 33 C.F.R. § 329. See, e.g., Norfolk District, U.S. Army Corps of Engineers, REPORT ON THE NAVIGABILITY OF THE RIVANNA RIVER, VA. (1982); USACE Norfolk Dist., REPORT ON THE NAVIGABILITY OF CRAIG CREEK, VA. (1980); USACE Wilmington Dist., REPORT ON NAVIGATION OF STREAMS TRIBUTARY TO THE UPPER ROANOKE RIVER BASIN, VA. (1976); USACE Norfolk Dist., NAVIGABILITY OF THE JACKSON RIVER, VA. (1976); USACE Norfolk Dist., REPORT ON NAVIGATION IN THE MAURY RIVER BASIN: AN INVESTIGATION TO DETERMINE THE HEAD OF NAVIGATION (1974).

²⁹²

See RIVANNA RIVER, at 1 (14.4 f.p.m. avg. gradient); UPPER ROANOKE RIVER BASIN at 9-2, 9-25 to 9-35 (13 f.p.m. avg. gradient and minimum 118 sq. mi. drainage area on navigable section of North Fork Roanoke River; 19.3 f.p.m. avg. gradient and minimum 139 sq. mi. area on South Fork Roanoke River; 109 sq. minimum drainage area on Tinker Creek); JACKSON RIVER at 8, 11 (maximum 13.9 f.p.m. gradient on upper navigable section with section above becoming non-navigable at 19.4 f.p.m.); MAURY RIVER BASIN at 2, App. 17 (27 f.p.m. gradient section was non-navigable).

²⁹³

See 33 C.F.R. § 329.15(c) (1998) (Army Corps of Engineers regulations for determining navigability); *Loving*, 548 F. Supp. at 1084. See generally VBPW SURVEYS, *supra* notes 270-71; U.S. ARMY CORPS OF ENGINEERS SURVEYS, *supra* notes 283, 285-86, 290.

gradient of less than thirty-five feet per mile (35 f.p.m.) may be considered a floatable watercourse. The historical record suggests that the stream gradient benchmark (35 f.p.m.) represents the upper limits of floatability but a few 19th century “public highway” statutes have encompassed smaller watersheds.²⁹⁴

VII. PUBLIC TRUST AND OTHER STATE INTERESTS

A. *Public Trust Interests and Limits on Governmental Discretion*

Certain public rights and interests in watercourses are vested as a public trust in the State of West Virginia. The status of streams as navigable, floatable or non-floatable and the public or private ownership of their beds determine the nature of such public trusts interests. In many states, these public interests and various state law limitations upon their management or alienation are known as the public trust doctrine,²⁹⁵ but neither Virginia nor West Virginia have adopted this doctrine. Instead, in West Virginia these trust interests arise from the *jus publicum*²⁹⁶ assumed from the English Crown and the 1780 and 1802 Acts reserving watercourses as common lands.²⁹⁷ In contrast to the public trust doctrine, the commons lands concept is less flexible since it expressly defines the protected public uses.²⁹⁸ The *jus publicum* protects the public right to navigation and floatage regardless of the public or private ownership of the beds and banks, public fishing rights in certain circumstances and other public uses.²⁹⁹ However, the State’s proprietary interests in beds and banks, i.e., the *jus privatum*, can be transferred to private grantees subject to those rights protected as *jus publicum*.³⁰⁰

The *jus publicum* vests in the Legislature both a duty and substantial discretion to manage these resources in the best interests of the State and does not

²⁹⁴ See *infra* Appendix A .

²⁹⁵ See WATERS AND WATER RIGHTS, at § 30.02(a)-(c) (the public trust doctrine evolved from the English commons concept). In several states, the doctrine imposes limits upon legislative discretion based on implied state constitutional authority or the state sovereign lands doctrine based on federal constitutional law. See *id.* at § 30.02(d)(3). See generally Butler, *supra* note 51 at 867-91.

²⁹⁶ See *supra* notes 7, 34-55 and accompanying text.

²⁹⁷ See generally *In re Steuart Transp. Co.*, 495 F.Supp. 38, 40 (E.D. Va. 1980); *Campbell, Brown*, 93 S.E.2d at 260; *Taylor v. Commonwealth*, 47 S.E. 875, 878 (Va. 1904); *Gaston*, 10 S.E. at 63-64; *Barre*, 1 S.E. at 324; *Garner*, 44 Va. (3 Gratt.) 655, 656 (Va. 1846) ; *Stokes & Smith*, 30 Va. (3 Leigh) at 337-40. *In re West Virginia Power & Transmission Co.*, 1930D P.U.R. 225, 243-44 (W.Va. PSC 1930). See also DE JURE MARIS, *supra* note 46, at 9.

²⁹⁸ See Butler, *supra* note 51, at 889-91.

²⁹⁹ See *Shively v. Bowlby*, 152 U.S. 1 (1893); *Smith v. Maryland*, 59 U.S. 71, 74-75 (1855); *Campbell, Brown*, 93 S.E.2d at 258; *James River & Kanawha Power Co.*, 122 S.E. 344, 346-47; *Gaston*, 10 S.E. at 62; *Stokes & Smith*, 30 Va. (3 Leigh) at 337-340.

³⁰⁰ See *Newport News*, 164 S.E. at 696-97; see also *supra* note 297.

necessarily mandate that any one public purpose should dominate.³⁰¹ Pursuant to the 1780 and 1802 Acts and the Mill Act, both the Virginia General Assembly and West Virginia Legislature have exercised their *jus publicum* powers to give priority to certain public uses, e.g., “fishing, fowling and hunting” on the common lands³⁰² and protection of navigation, floatage and passage of fish.

However, federal constitutional law imposes limits upon the Legislature’s discretion. The federal navigational servitude protects navigation on navigable watercourses and regulation of commerce thereon by Congress.³⁰³ Of greater significance, the state sovereign lands doctrine provides that at independence, as an incident of state sovereignty, the original thirteen states acquired title to non-tidal watercourses and other public rights therein as a public trust.³⁰⁴ These protected interests include both title and public uses not lawfully granted away prior to independence by the Crown or Colonial government. Navigation, commerce and fishing in navigable watercourses are such public uses held in trust which cannot be impaired or alienated by the Legislature except to promote another public purpose.³⁰⁵ However, transfers by the State of title to beds or other interests to private grantees are valid if they promote a public purpose or do not cause “substantial impairment” of the protected public uses.³⁰⁶ Such post-independence transfers to private grantees are subject to the protected public uses and are revocable, if not void, if they impair such interests without advancing a valid public purpose.³⁰⁷ Both colonial and post-independence creation of private rights will be strictly construed and interpreted as implicitly reserving all public rights not expressly conveyed.³⁰⁸

³⁰¹ See *Newport News*, 164 S.E. at 689, 692 (the Legislature may impair a public right protected as *jus publicum* if the purpose is to advance another valid public use); see also *Crenshaw*, 27 Va. (6 Rand.) at 290.

³⁰² See VA. CODE ch. 62, §§ 1 and 2 (1860); See *Meredith v. Triple Island Gunning Club, Inc.*, 73 S.E. 721, 723 (Va. 1912). WATERS OF THE STATE at 213-229. See generally *International Shoe Co. v. Heatwole*, 30 S.E.2d 537 (W.Va. 1944); *Miller*, 99 S.E. at 447; *Newport News*, 164 S.E. at 692; *Garrison*, 75 Va. at 163.

³⁰³ See *supra* note 4.

³⁰⁴ See generally *Idaho v. Coeur d'Alene Tribe of Idaho*, 521 U.S. 261, 283-84 (1997); *Shively*, 152 U.S. at 1; *Illinois Central Railroad v. Illinois*, 146 U.S. 387, 452-58 (1892); *Barney v. Keokuk*, 94 U.S. 324 (1877); and *Stockton v. Baltimore & N.Y.R.R.*, 32 F. 9, 19-20 (C.C.D.N.J. 1887).

³⁰⁵ See generally *Idaho*, 521 U.S. at 283-84; *Illinois Central Railroad*, 146 U.S. at 453-56; *Martin v. Waddell*, 41 U.S. 367, 410 (1842); *Lake Michigan Federation v. U.S. Army Corps of Engineers*, 742 F.Supp. 441 (N.D. Ill. 1990). Numerous state courts have adopted the rule that a legislature cannot extinguish the public uses protected by the public trust doctrine except to advance valid public purposes. WATERS AND WATER RIGHTS, *supra* note 3, at § 30.02(d)(2).

³⁰⁶ See generally *Illinois Central Railroad*, 146 U.S. at 453; *Shively*, 152 U.S. at 47; *Stockton v. Baltimore & N.Y.R. Co.*, 32 F. 9, 19-20; *Caminiti v. Boyle*, 732 P.2d 989 (Wash. 1987), *cert. denied*, 484 U.S. 1008 (1988); and *Virginia v. Newport News*, 164 S.E. 689, 695-97 (1932).

³⁰⁷ See *supra* notes 305-06.

³⁰⁸ See generally *Illinois Central Railroad*, 146 U.S. at 436, 452-58 (non-tidal navigable river is subject to public trust doctrine and legislative grant of its bed will be strictly construed and interpreted as

Most federal cases interpreting the state sovereign lands doctrine involved navigable watercourses. The extent to which this doctrine also applies to the common lands and other public rights in West Virginia's floatable and non-floatable streams is undetermined. These federal cases have held that non-navigable *tidal* waters are such "sovereign lands" subject to the doctrine if ownership was reserved by the states in trust.³⁰⁹ In *Gaston v. Mace*,³¹⁰ the West Virginia Supreme Court held that floatage was included within the *jus publicum* and it is such interests that are protected by the state sovereign lands doctrine.³¹¹ Therefore, public uses of West Virginia's navigable and floatable streams, and the title to the beds and banks if reserved as common lands, are subject to the state sovereign lands doctrine. However, there is no federal case law that extends the doctrine to the common lands in non-floatable waters and no West Virginia authority limits the Legislature's power to manage or alienate such interests. The federal case law suggests that whether these relatively isolated common lands are protected by the doctrine would turn on a site specific examination of any customary public uses, the reasonable prospects for future uses protected as *jus publicum* and/or the relationship of such non-floatable waters to the exercise of state sovereign powers at the time of independence. But given two centuries of statutory dedication as common lands, it seems reasonable that West Virginia would, if not adopt the public trust doctrine, at least apply an elevated standard of state judicial review for any legislative or executive branch impairment or alienation of public rights in the non-floatable waters.

B. *Public Fishing Rights and Private Fisheries*

The ownership of fish and aquatic life is vested in the State of West Virginia as a public trust for the use, benefit and enjoyment of its citizens.³¹² Subject to applicable fish and game laws, the public has the right to fish, fowl and hunt on those watercourses which are common lands (which may include non-floatable waters).³¹³ Over private beds, where title to riparian lands originate post-independence, the public right of fishing in navigable waters appears secure. However, it seems doubtful that this public right extends to floatable waters over private

implicitly reserving all public rights not expressly conveyed away); *Martin v. Waddell*, 41 U.S. 367, 410-11 (1842) (The alienation of public fishing rights in tidal waters by a New Jersey Colonial grant will be strictly construed.); and *Darling v. City of Newport News*, 96 S.E. 307 (Va. 1918).

³⁰⁹ See, e.g., *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 472, 475-76 (1988); *Shively*, 152 U.S. at 11, 26, 57.

³¹⁰ 10 S.E. 60 (1889).

³¹¹ See *id.* at 63-64.

³¹² W.VA. CODE § 20-2-3 (1998). See also *Shobe v. Latimer*, 253 S.E.2d 54 (W.Va. 1979); *State v. Southern Coal & Transp. Co.*, 76 S.E. 970 (W.Va. 1912).

³¹³ Va. Code Ch. 62, §§ 1 and 2 (1860); see *supra* notes and accompanying text 96-97, 110-12.

beds. But most problematic are riparian titles originating during the colonial period where the relative public and private rights of fishing in all waters, navigable and otherwise, are subject to significant dispute.

The Virginia General Assembly enacted the 1705 Land Act³¹⁴ to establish uniform patenting procedures and patents which conveyed to the grantee the “rivers, waters, water courses, together with the privileges of hunting, hawking, fishing and fowling” within the bounds of the patent. Some patents were issued under other authority and did not necessarily incorporate the same conveyancing terms.³¹⁵ Whether the 1705 Land Act language conveyed an exclusive right of fishing to the grantee, or some lesser right, has become increasingly topical with the growth of recreational use of streams and conflicts with riparian landowners. In a divided 1996 decision of first impression, *Kraft v. Burr*,³¹⁶ the Virginia Supreme Court held that riparian landowners which trace their title to Colonial patents issued under the 1705 Land Act, which conveyed the “privilege of....fishing,” are vested with an exclusive right and can prohibit fishing by the public even in floatable or navigable waters. Regrettably, the *Kraft* Court did not consider whether the 1705 Act actually conveyed less than an exclusive right due to defects in pleading by appellants and deficiencies in the evidentiary record.³¹⁷

The dispute in Colonial law concerning private fisheries is exacerbated due to the loss of Colonial governmental and historical records and the slow progress in archiving those which survived.³¹⁸ During the colonial period, the rule in England gave the riparian landowner on a freshwater stream an exclusive fishery to the extent of his ownership of the bed.³¹⁹ The “common of piscary”³²⁰ provided a public liberty of fishing in tidal waters but even there the Crown could grant an exclusive private fishery.³²¹

³¹⁴ 3 Va. Hening’s Stat. 21 (1705).

³¹⁵ VA. LAND OFFICE INVENTORY, xiv-xvi. The 1705 Land Act remained in effect until independence and, with the exception of the Northern Neck Proprietary grants, most colonial period land titles in West Virginia were established under this Act. VA. LAND GRANTS, *supra* note 11, at 16-17.

³¹⁶ 476 S.E.2d 715 (Va. 1996). The *Kraft* Court considered whether Colonial patents issued in Allegheny County in 1750 and 1769 granted exclusive fishing rights in the Jackson River which is a navigable river. The riparian landowners brought a civil action in trespass to exclude a professional fishing guide from fishing from his boat over their private beds. The Court acknowledged the long established rule that the subject patents conveyed title to the bed and held that the patents conveyed an exclusive right of fishing to the riparians who could enjoin others from fishing as a trespass.

³¹⁷ *Kraft*, 476 S.E.2d at 717, n.4, 719-21 (Koontz, J., dissenting).

³¹⁸ See Livingston, *supra* note 55, at 348. Since the 1950’s, the Virginia State Library has been gradually researching and recovering Virginia colonial period records from the United Kingdom.

³¹⁹ See ROYAL PISCARIE OF THE BANNE, 8 James I (1610). See also FARNHAM, *supra* note 2, at § 368b; MOORE, *supra* note 141, at 247-49; HALE, *supra* note 46, at 1, 11.

³²⁰ ROYAL PISCARIE OF THE BANNE. MOORE, *supra* note 141 at 711-16.

³²¹ See FARNHAM, *supra* note 2, at § 369. See also HALE, *supra* note 46, at 11, 17.

Early Virginia cases take an expansive view of *jus publicum* interests and included the public right of fishing in all navigable waters.³²² But later decisions hold that public fishing in non-tidal waters is not protected as *jus publicum* and is merely *jus privatum* in which an exclusive right could be granted.³²³ There is no West Virginia authority on point. After independence, the state sovereign lands doctrine protects public fishing in navigable waters, and possibly lesser streams, as *jus publicum* and exclusive rights may be granted only when they serve a compelling public interest expressly articulated by a legislature or do not result in “substantially impairment” of the public right.³²⁴ Grants of exclusive rights during the colonial period which impair *jus publicum* interests such as public fishing must be express and are strictly construed.³²⁵ Under the general rule of strict construction, the “privilege of fishing” conveyed by the 1705 Land Act would not create exclusive rights.³²⁶ Therefore, as acknowledged but not resolved in *Kraft*, the issue is the intent of the 1705 Land Act to convey an exclusive right or some lesser private right in those waters in which the public otherwise has a right of passage.

Early Virginia fishing laws, navigation improvement acts and historical records acknowledge that private fisheries existed both before and after independence.³²⁷ The historical authorities consistently characterize a “fishery” as being only those specific shores or beds actually improved and used by the riparian land-owners for such purposes.³²⁸ A fishery was commonly comprised of specific waters which were physically enclosed by a riparian using stone or timber structures called “hedges,” “stops” or “weirs” to trap fish.³²⁹ A fishery was also frequently an ex-

³²² See, e.g., *James River & Kanawha Power Co.*, 122 S.E. 344, 346-47 (Va.1924); *Garrison v. Hall*, 75 Va. 150, 159, 162-63 (1881).

³²³ *Kraft*, 476 S.E.2d at 717; *Boerner*, 89 S.E.2d at 27. See also *Butler*, *supra* note 51, at 894-916 (criticizing recent Virginia decisions for a narrow interpretation of *jus publicum* and public trusts interests such as fishing).

³²⁴ See *supra* notes 304-06.

³²⁵ See *supra* note 308, *Wadell*, 41 U.S. at 410-11, *Darling*, 96 S.E. at 308; *FARNHAM*, *supra* note 2, at § 369a, § 372.

³²⁶ *FARNHAM*, *supra* note 2, at § 372 (Crown grant which conveyed the “right of fishery” and which included submerged lands does not create an exclusive fishery over those lands).

³²⁷ See *infra* notes 328-30, 336; 12 Va. Hening’s Stat. 792, 795 (1788) (legislation for navigational improvement of Appomattox River shall not “affect the private right of any individual owning a fishery on said river”); *Livingston*, *supra* note 55, at 347-48. *Charles City County Petitions*, 2 TYLER’S Q. HIST. MAG. 171 (1921) (1833 petition to General Assembly by owner of “Berkeley fishery” in tidal waters of James River states that fishery had existed for nearly a century and requested relief from downstream gill seines which obstructed passage of fish to the fishery).

³²⁸ See *infra* notes 329-30; J.F.D. Smyth, *Smyth’s Travels in Virginia in 1773* (1884) (reprinted in 6 VA. HIST. REG. at 131-132, (1853)) (describing the James River at Richmond: “Just below the falls there are very lucrative fisheries, on each side of the river, as there are many more on the James in different places, that yield great profit to the owners.”).

³²⁹ *BEVERLY*, *supra* note 9, at 310. The Colonial stream obstruction acts and their successor, the Mill

clusive right to use a tidal shore or non-tidal river bank, adjacent to waters cleared of obstructions, for fixing heavy “seines” or nets to catch and haul in fish.³³⁰ The exclusive right was limited to that shore, cleared pool or bed actually enclosed or occupied by the fishery and was intended to protect and encourage the effort and expense incurred by the owner in establishing it.³³¹

That the “privileges of....fishing” in the 1705 Land Act may have conveyed less than an exclusive right, e.g., exclusive use of a fishing “hedge” or a bank or shore for seine fishing, was not examined by the Kraft majority and was the basis for the dissent.³³² Prior to Kraft, the dictum of an 1828 Virginia case, *Crenshaw v. Slate River Company*, acknowledged an exclusive right in a non-navigable stream under a 1726 patent (the terms of patent are not indicated).³³³ In *Institutes of Common and Statute Law* (“Minor’s Institutes”), the leading 19th century treatise on Virginia law, Professor John D. Minor reported that at common law all persons may fish in “public waters” (navigable watercourses), absent an express grant of an exclusive right of fishery, without regard to ownership of the bed.³³⁴ This public right of fishing did not extend to “private waters” (non-navigable watercourses) unless they were common lands reserved by the 1780 or 1802 Acts.³³⁵ In 1785, the Virginia General Assembly approved a compact with Maryland which established certain mutual rights in the Potomac River, their common boundary, consistent with Minor’s Institutes and the historical accounts:

The river Potowmack shall be considered as a common

Act as amended in 1792, were much concerned with protecting navigation from fishing hedges. *See supra* text accompanying notes 158-60, 196-202.

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Carson v. Blazer, 2 Binn. 475, 486-87 (Pa. 1810)(in Pennsylvania, the exclusive right to a private “shad fishery” in a navigable river was limited to a cleared pool). *Case of Robert Liny*, 2 Va. Hening’s. Stat. 456 (1679) (a declaratory order of the General Assembly granting an exclusive use of a tidal shore for an adjacent seine fishery); John C. Pearson, *The Fish and Fisheries of Colonial Virginia (Second Installment)*, 22 WILLIAM & MARY C. HIST. MAG. at 353-360, 358-58 (1942); John C. Pearson, *The Fish and Fisheries of Colonial Virginia (Fourth Installment)*, 22 WILLIAM & MARY C. HIST. MAG. at 130-135(1942).

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Id.

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Kraft, 476 S.E.2d at 719-21.

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Crenshaw, 27 Va. (6 Rand) at 289, 298.

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J. D. MINOR, 2 INSTITUTES OF COMMON AND STATUTE LAW 13-15 (4th ed. 1892). Minor (1813-1895) was a professor of law from 1845 to 1895 at the University of Virginia and the acknowledged leading authority in Virginia common and statutory law. The INSTITUTES were compilations of his lectures and frequently cited as authority by the Supreme Courts of Virginia and West Virginia in riparian rights, water law and numerous other subjects. H. Bryson, *LEGAL EDUCATION IN VIRGINIA, 1779-1979: A BIOGRAPHICAL APPROACH* 417-29 (1982); *Gaston*, 10 S.E. at 66.

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MINOR, *supra* note 334, at 15; Minor defined a navigable watercourse as “capable of being navigated by vessels employed in commerce (say of 20 tons burden or more)” which would appear to exclude floatable watercourses. *Id.* at 14. The distinction between navigable and floatable waters evolved in the last half of the nineteenth century. During the colonial and early antebellum periods, waters considered navigable appear to have included larger floatable streams. *See supra* note 248.

highway... the citizens of each state respectively shall have full property in the shores of Potowmack river adjoining their lands, with all emoluments and advantages thereunto belonging... but the right of fishing in the river shall be common to, and equally enjoyed by the citizens of both states. Provided, That such common right be not exercised by the citizens of the one state, to the hindrance or disturbance of the fisheries on the shores of the other state; and that the citizens of neither state shall have a right to fish with nets or seines on the shores of the other.³³⁶

Many other states have rejected the English rule and held that public fishing rights over private beds, and in fewer instances hunting, fowling and other recreational uses, are incidental or co-extensive with the right of passage.³³⁷ Kentucky, which was formed from Virginia in 1792 and adopted its common law, holds that the public right of fishing and other recreational uses over a private bed are co-extensive with the right of navigation.³³⁸ While there are no West Virginia cases on point, several formal opinions issued during the 1920's and 1930's by the Attorney General of West Virginia supported a public right of fishing over private beds in navigable waters but rejected such rights in floatable waters.³³⁹ As recognized in both the majority opinion and dissent in *Kraft*, further development of the historical record is necessary before the question of exclusive fishing rights under Colonial patents can be resolved with confidence.

In West Virginia's Eastern Panhandle, settled extensively during the colonial period, riparian land titles are dominated by grants of the Northern Neck Proprietary north of the Fairfax Line.³⁴⁰ Unlike Colonial patents, the grants issued by the Proprietary conveyed no express rights of fishing or fishery to the private grantees.³⁴¹ The Proprietary was based on the English manor system and its grants and

³³⁶ 12 Va. Hening's Stat. 51 (1785). The 1785 Compact applied to both tidal and non-tidal waters of the Potomac River and was intended to preserve the existing riparian and public rights along that section within contemporary West Virginia. *Maryland v. West Virginia*, 217 U.S. 577, 580-81 (1910). 35 Op. W. Va. Att'y Gen. 32 (1932).

³³⁷ 2 FARNHAM, *supra* note 2, at § 368c (1904); THE LAW OF WATERS AND WATER RIGHTS, *supra* note 3, § 30.02.

³³⁸ *Pierson v. Coffee*, 706 S.W.2d 409, 412 (Ky. 1985) (the origin of riparian title and the rights granted were not discussed); *See also supra* note 27 (Kentucky adopted Virginia common law). In Kentucky, there was no statutory reservation of streambeds nearly all of which are in the riparian owners. *See supra* note 28.

³³⁹ 35 W. Va. Op. Att'y. Gen. 248 (1933); 34 W. Va. Op. Att'y. Gen. 107 (1931); 31 W. Va. Op. Att'y. Gen. 328 (1926); 29 Op. W. Va. Att'y. Gen. 258 (1921).

³⁴⁰ *See supra* text accompanying notes 13-21.

³⁴¹ *See supra* text accompanying notes 25-26. EMBREY, *supra* note 26, at 94-127 (prior to 1710,

leases were feudal in nature.³⁴² In the manor system, the common lands, watercourses and rights of fishery were vested in the lord of the manor (i.e., Proprietor of the Northern Neck) and their common use by the manor's tenants were regulated by the custom of each manor.³⁴³ While no historical accounts have been located, it appears from its grants and leases that the Proprietary intended to retain the same manorial fishing rights. Since pre-independence conveyances of exclusive fishing rights must be express and are strictly construed, the Northern Neck grants conveyed no such rights to private grantees. Given the limited extent of Colonial patents in Trans-Allegheny Virginia, rights of private fisheries in contemporary West Virginia will be limited principally to the Ohio, Kanawha, Greenbrier and lower Monongahela River Valleys and the Eastern Panhandle south of the Fairfax Line. But modern fish and game laws and environmental regulatory requirements have significantly attenuated, if not rendered obsolete, these ancient private rights.

After independence, Virginia Land Office patents (those not subject to the reservation of common lands), and West Virginia land grants and school land deeds contained no express language conveying fishing rights or fisheries which would infringe upon the public right. Post-independence conveyances of riparian lands are subject to the state sovereign lands doctrine, protecting public fishing rights as *jus publicum*, and any transfer of such rights to private grantees is strictly construed and revocable, if not void, if it substantially impairs these public rights without advancing a valid public purpose. Therefore, the applicable authority supports the conclusion that none of these post-independence patents, grants and school land deeds impaired the public right or created any private right of fishery in navigable or floatable watercourses.

C. *Public Title Between Ordinary Low Water Marks and Adjacent Public Easements*

Public title includes the bed and banks between the ordinary low water marks³⁴⁴ of a watercourse.³⁴⁵ Pursuant to the common law and the enactment of

some Proprietary grants conveyed a "privilege of...fishing" but this was before any grants were issued in West Virginia). HARRISON, *supra* note 11, at 94-95. The Proprietary continued to issue grants until the death of Lord Fairfax in 1781. Smith, *supra* note 15, at 280.

³⁴² RICE, *supra* note 19, at 24-25. EARLY FAIRFAX LAND GRANTS, *supra* note 21, at 2-3, 6. Smith, *supra* note 15, at 280. The Proprietary was a quasi-sovereign entity and was exempt from Colonial land laws such as the 1705 Land Act. See *supra* notes 16-17.

³⁴³ SIR WILLIAM SEARLE HOLDSWORTH, HISTORY OF ENGLISH LAW 362-65, 594-605, 620-22 (2nd ed. 1911). 4 HARDINGE STANLEY GIFFARD HALSBURY, THE LAWS OF ENGLAND, 479-80 (1909); 8 HARDINGE STANLEY GIFFARD HALSBURY, THE LAWS OF ENGLAND 4, 7, 24, 68 (1909).

³⁴⁴ The "ordinary low-water mark" is that point to which the water recedes at its lowest normal level. Union Sand & Gravel Co. v. Northcott, 135 S.E. 589 (W.Va. 1926).

³⁴⁵ Campbell, Brown, 93 S.E. 2d at 260; Barre, 1 S.E. at 738-40 (reversing the holding four years earlier in *Town of Ravenswood v. Fleming*, 22 W. Va. 52, 67-68 (1883), adopting the Virginia common law rule that riparian lands extended down to only the ordinary high-water mark).

February 16, 1819 (1819 Act),³⁴⁶ the State of West Virginia is vested with a public easement between the ordinary low-water and ordinary high-water marks³⁴⁷ on certain streams for specific purposes.³⁴⁸ The purpose of the common law easement is to facilitate public access to and use of navigable waters for purposes reasonably related to navigation and commerce.³⁴⁹ On floatable streams, there is a common law right to make reasonable and necessary use of the banks for floatage, but the extent of this right is undetermined.³⁵⁰ delete³⁵¹ These common law easements are appurtenant to the rights of navigation or floatage regardless of the public or private ownership of the bed.

On the eastern waters, pursuant to the 1819 Act, a statutory easement exists between the ordinary low and high-water marks for "fishing, fowling and hunting" and necessary incidents thereof by the public adjacent to those water-courses in public ownership (i.e. "used as common" prior to 1780).³⁵² Until the 1819 Act, it was generally held that the title of riparian landowners extended down to only the ordinary high water mark although there had historically been significant debate particularly in regard to tidal shores.³⁵³ To resolve this issue, the General Assembly lowered all riparian boundaries on the eastern waters to the low wa-

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1819 Va. Acts ch. 87, § 1. I VA. CODE 341 (1819). The Act reads in relevant part:

WHEREAS doubts exist how far the rights of owners of shores on the Atlantic ocean, the Chesapeake bay and the rivers and creeks thereof.....extend; for explanation whereof, and in order effectually to secure said rightshereafter the limits or bounds of the several tracts of land lying on the Atlantic ocean, the Chesapeake bay, and the rivers and creeks thereof.....shall extend to ordinary low water mark; and the owners of said lands shall have, possess and enjoy exclusive rights and privileges to, and along the shores thereof, down to ordinary low water mark*provided, also*, That nothing in this section contained shall be construed to prohibit any person or persons from the right of fishing, fowling and hunting on those shores....which are now used as a common to all the good people [of the Commonwealth].

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"Ordinary high water mark" means that point on the bank below which the intermittent presence and action of the water creates a distinction in character of both the soil and vegetation and is normally the top of the bank. *State ex rel. Johnson v. City of Charleston*, 112 S.E. 577 (W.Va. 1922).

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VA. CODE ch. 62, § 2 (1860). *Bradford v. Nature Conservancy*, 294 S.E.2d 866 (Va. 1982); *Barre*, 1 S.E. at 738-40; *Northcott*, 135 S.E. 591-92. 52 Op. W. Va. Att'y. Gen. 401 (1967).

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Barre, 1 S.E. at 738-40.

350

Hot Springs Lumber, 55 S.E. at 582 (quoting FARNHAM, § 25); *Gaston*, 10 S.E. at 63. These rights include tying or mooring watercraft to the bank.

351

W. VA. CODE § 61-3-25 (1997)(making it a felony to unfasten a floating craft from the "bank of any stream" or otherwise cause it to be set adrift or float away).

352

Supra note 347. *Bradford*, 294 S.E.2d at 873-74; *Miller*, 166 S.E. at 566.

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French, 52 Va. (11 Gratt.) at 159-60. *See Miller*, 166 S.E. at 565-66. *Livingston*, *supra* note 55, at 353-55. *Butler*, *supra* note 51, at 902-03. The rule in England provided that the Crown was vested with the tidal shores to the ordinary high-water mark. *DE JURE MARIS*, *supra* note 46, at 12-13.

ter mark subject to a statutory public easement.³⁵⁴ However, possibly due to the focus on tidal shores, this legislation was not extended to the western waters.³⁵⁵ There is no authority which supports a public easement for fishing, fowling or hunting adjacent to public beds on the western waters.

D. The West Virginia Mill Act: Protection of Navigation, Floatage and Passage of Fish

The venerable "Mill Act"³⁵⁶ stands as the State's oldest, albeit neglected, regulatory program for water resources with both civil remedies and criminal penalties.³⁵⁷ Since 1785, it has protected navigable and floatable watercourses, and the free passage of fish in all watercourses, from mill-dams and other obstructions.³⁵⁸ Under the jurisdiction of the county courts (commissions) until 1931, the Mill Act has since been administered by the West Virginia Division of Natural Resources (WVDNR).³⁵⁹ The Act requires that provision be made for the passage of boats, watercraft and saw-logs through any dam or other structure installed in a navigable or floatable watercourse. The Mill Act further requires that a fish ladder or flume for the passage of fish be provided in all watercourses unless this requirement is waived by the WVDNR Director or a dam is authorized pursuant to the Dam Safety Act³⁶⁰, i.e., dams exceeding certain height and other jurisdictional requirements. No

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Id.; see *supra* note 346.

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Barre, 1 S.E. at 319; *Ravenswood*, 22 W. Va. at 67. The question of public rights between the low and high water marks for purposes other than navigation and commerce was emasculated by the *Barre* holding that title at common law had always extended to the low water mark. The *Barre* Court did not attempt to reconcile its decision with the earlier Virginia cases supporting the high water mark and dismissed its earlier adoption of the Virginia rule in *Ravenswood*. There are no Virginia cases reviewing whether riparian boundaries extend to the high or low water mark on the western waters.

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W.VA. CODE § 61-3-47 (1966).

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See *supra* text accompanying notes 191-98. In 1792, the Mill Act was amended to incorporate the provisions of the obstruction legislation enacted during the colonial period. 1 Shep. 136 (1792). See *supra* text accompanying notes 191-208. In significant respects, the Mill Act has been supplanted by the regulatory jurisdiction of the U.S. Army Corps of Engineers. Since 1899, the Corps has regulated obstructions to navigation pursuant to the Rivers and Harbors Act, 33 U.S.C. § 403 and § 407. Since 1972, the Corps has required Dredge and Fill Permits pursuant to Section 404 of the Federal Clean Water Act (FCWA), 33 U.S.C. § 1344, to protect water quality, fisheries and other natural resources in both navigable and non-navigable waters. WATERS AND WATER RIGHTS, *supra* note 3, at § 52.05(d), § 61.03(c). As an administrative practice, WVDNR has relied upon consultation with the Corps in the exercise of its federal jurisdiction to address stream obstruction issues and has effectively neglected the mandatory provisions of the Mill Act.

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Id. See generally *Elk Island*, 24 S.E. 590; see *Watts v. Norfolk & W. R. Co.*, 39 W.Va. 196, 210-11 (1894); see generally *Anthony*, 28 Va. (1 Leigh) 9; see generally *Kownslar*, 21 Va. (1 Gilmer) 127.

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See *supra* text accompanying notes 191-198. W.VA. CODE § 61-3-47 (1931) (Revisor's Note). In 1931, the Mill Act regulatory authority was vested in the West Virginia Conservation Commission which was the predecessor of WVDNR.

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W.VA. CODE § 22-14-1(1994). The 1994 amendment of the Mill Act excepts dams authorized under both Chapter twenty and Chapter twenty-two apparently because in the 1994 comprehensive reorgani-

regulations have been promulgated by WVDNR for administering the Mill Act.

E. Minimum Instream Flow for Public Use

The State of West Virginia is vested with a *jus publicum* interest in the protection of the quantity of natural flow in certain watercourses.³⁶¹ For watercourses in public ownership, the State has a public trust interest in the provision of such minimum in-stream flow as necessary for the protection of the public uses authorized at common law and the 1780 and 1802 Acts.³⁶² Further, this public trust interest includes the protection of such minimum instream flow as necessary for navigation of navigable watercourses and floatage on floatable watercourses whether their beds are public or private.³⁶³ However, there is no judicial or statutory authority in Virginia or West Virginia which extends this trust interest in instream flow to watercourses which are both private and non-floatable.

F. State Ownership Vested in West Virginia Public Land Corporation

The common lands and other property interests of the State of West Virginia in its watercourses, including the surface, minerals, water rights and the common law and statutory easements between the ordinary low and high water marks, are vested in the West Virginia Public Land Corporation.³⁶⁴ The Public Land Corporation (PLC), which is included within the West Virginia Division of Natural Resources (WVDNR) for administrative purposes, is governed by a five member Board of Directors chaired by the WVDNR Director.³⁶⁵ Historically, the PLC has issued licenses and charged annual fees for utilities, wharfs, bridges and

zation of state environmental regulatory statutes, the Dam Safety Act was moved from Chapter twenty to Chapter twenty-two. 1994 W. Va. Acts 61.

³⁶¹ West Virginia is a common law riparian state which has adopted the "reasonable use" doctrine granting each riparian landowner on a given watercourse an equal and correlative right to a reasonable consumptive use of the natural flow. A riparian may make such consumptive use as does not materially diminish the same rights of the downstream riparians to a reasonable consumptive use or impair certain public rights. *Supra* note 3. *Morris v. Priddy*, 383 S.E.2d 770 (W. Va. 1989); *Roberts v. Martin*, 77 S.E. 535 (W. Va. 1913); *Gaston*, 10 S.E. at 22-23; *Coalter v. Hunter*, 25 Va. 58 (1826); Marlyn E. Lugar, *Water Law in West Virginia*, 66 W. VA. L. REV. 191 (1964).

³⁶² W.VA. CODE § 22-11-2 (1994); *Gaston*, 10 S.E. at 23; *See Hollingsworths v. Dunbar*, 19 Va. (5 Munf.) 199, 213, 217 (1816).

³⁶³ *Gaston*, 10 S.E. at 23; *Stokes & Smith*, 30 Va. (3 Leigh) at 337.

³⁶⁴ W.VA. CODE § 20-1A-1(c) (1986). *Campbell, Brown*, 93 S.E.2d at 260; *Samsell v. State Line Dev. Co.*, 174 S.E.2d 318, 324-25 (W. Va. 1970). From 1863 until 1933, when the PLC was created, the common lands were under the control of the Governor pursuant to his chief executive powers since no statute vested either title or management in any other state officer or agency. W. VA. CONST. art. VII, § 5. 1933 W.Va. Acts 54 (Ex. Sess.). Other than the leasing of minerals under the Ohio River in the late 1800's, *supra* note 116, the extant historical records do not indicate that any Governor took action to manage these resources prior to 1933.

³⁶⁵ W.VA. CODE § 20-1A-2 (1989); W.VA CODE § 20-1A-3 (1989).

other structures and easements in the public beds and banks. It also receives significant revenue from royalties upon the dredging of coal from public river beds. But unlike its counterpart in Virginia, the PLC has not promulgated any administrative regulations or guidelines for the management or identification of the common lands.³⁶⁶ As recently as 1994, it was PLC practice to simply assert title to all watercourses, including even intermittent streams, regardless of their physical characteristics or the origin of riparian titles. The PLC estimates these common lands encompass approximately 34,000 stream miles and in excess of one hundred thousand (100,000) acres.³⁶⁷ This expansive policy of the PLC, and its reluctance to adopt regulations to identify the common lands, has been influenced by its desire for administrative simplicity and concerns for the potentially adverse effects upon its licensing and coal dredging revenues if it were to recognize private ownership of certain streambeds.

VIII. CONCLUSION

In 1811, upon reviewing the 1780 and 1802 Virginia common lands acts, Thomas Jefferson observed "that the just rights of riparian landholders have not yet been so well investigated and understood as they should be."³⁶⁸ It remains true today. In important respects, the relative public and private rights in West Virginia's watercourses are still subject to significant conflict and doubt. The rights of navigation and floatage over both public and private beds are long settled. Public use of the common lands for fishing, hunting and other customary uses also seem beyond dispute. But the identification and upstream limits of these common lands have not yet been resolved, or even significantly considered, by the State of West Virginia. Neither has the extent of public rights, other than a right of passage, over the private beds of navigable and floatable waters. Instead, the principal legal authorities are Virginia case law and statutes from the antebellum period.

The West Virginia Public Land Corporation estimates that the common lands exceed one hundred thousand acres (100,000 ac.) but has provided no regulations or guidelines whatsoever by which to identify them. The West Virginia Legislature has neglected the common lands for over a century leaving the PLC to manage them without statutory guidance. The status quo increasingly lends itself to confusion on the part of both riparian landowners and the public regarding their respective rights.

This article has attempted to provide specific guidance to identify the common lands based upon both legal and historical authority. However, the public

³⁶⁶ Virginia relies upon both statutory authority and administrative guidelines to identify the common lands. See *supra* note 224 and text accompanying notes 61-62.

³⁶⁷ J. Jones, W. Va. Div. of Natural Resources, *Streambed Ownership in West Virginia*, WONDERFUL W. VA. MAG. 33 (June 1994).

³⁶⁸ FARM BOOK, at 384 (Jan. 16, 1811 letter to Va. Governor James Monroe).

must necessarily look to the Public Land Corporation to define those watercourses it considers to be common lands under its jurisdiction. But judicial review will be necessary before the extent of the common lands are resolved with finality. In regard to fishing and other public rights over private beds, particularly where riparian title originates in the colonial period, additional historical research will be necessary before the courts can adjudicate these issues in a responsible manner. The resolution of over two centuries of statutory ambiguity and conflicting public and private interests will require attention of both the executive and judicial branches of state government.

IX. APPENDIX A — WATERCOURSES DESIGNATED AS PUBLIC HIGHWAYS
PURSUANT TO THE VIRGINIA AND WEST VIRGINIA MILL ACTS

Beach Fork of Twelve Pole River (Wayne Co.) — Lower portion within Wayne County (below mouth of Bowen Creek). 1848-49 Va. Acts ch. 204. Total Drainage Area: 83 sq. mi., minimum: 35.

Blue Creek (Kanawha Co.) — From its mouth upstream to “mill of Joseph C. Kendall” (Sanderson, W.Va.). 1856 Va. Acts ch. 416. Total drainage area: 80 sq. mi., minimum: 36.

Big Indian Cr. (Monongalia Co.) From its mouth to “John Neptune’s mill” (site not located). 1853 Va. Acts ch. 526. Total drainage area: 19 sq. mi.

Bingamon Creek (Harrison Co.) — From its mouth to Quaker Fork. 1838 Va. Acts ch. 210. Total drainage area: 46 sq. mi., minimum: 5.8.

Booths Creek (Harrison Co.) — From its mouth to the “George T. Martin mill” (Boothsville, W.Va.). 1839 Va. Acts ch. 147. Total drainage area: 44 sq. mi., minimum: 33 sq. mi.

Browns Creek (Kanawha Co.) — From its mouth to its forks, up Left Hand Fork to “Augustus Wood’s line”, and up Right Fork to Rock Camp Branch. 1838 Va. Acts ch. 213. Total drainage area: 11.2 sq. mi. (drainage areas unavailable for tributaries).

Buckeye Fork of Middle Island Creek (Doddridge Co.) — Between the mouths of Long Run and Indian Fork. 1869 W. Va. Acts 61. Total drainage area: 39 sq. mi., maximum (Long Run): 19, minimum (Indian Fork): 5.6.

Buffalo Creek (Marion Co.) — From its mouth to Clay Lick Fork (Warrior Fork). 1846-47 Va. Acts ch. 153. Total Drainage Area: 125 sq. mi., minimum: 7.4.

Cheat River - From mouth to one mile above “Daniel Kryger Quarry” (site not located). 1806 Va. Acts ch. 92. Rowlesburg upstream to mouth of the Dry Fork at Hendricks. 1856 Va. Acts ch. 414. Minimum drainage area (Hendricks): 490 sq. mi.

Cherry River — No upstream limit. 1872 W. Va. Acts 181, § 15. Total Drainage area: 166 sq. mi.

Coal River — From its mouth to Marsh Fork. 1834 Va. Acts ch. 108. Total

Drainage area: 892 sq. mi., minimum: 227.

Cranberry River — No upstream limit. 1872 W. Va. Acts 181, § 15. Total Drainage area: 361 sq. mi.

Dunkard's Creek (Monongalia Co.) — From its mouth up to "main forks". 1838 Va. Acts ch. 214. Total drainage area: 233 sq. mi., minimum: 64.

Elk Creek (Harrison Co.) — From its mouth upstream to "George Jackson's Mill" (Main St. in Clarksburg) being the lower two miles. 1799-1800 Va. Acts ch. 57. Total drainage area: 121 sq. mi.

Elk Fork of Point Pleasant Creek (Tyler Co.) - From its mouth upstream to "Three Forks" (confluence with Middle Fork & Mudlick Run). 1856 Va. Acts ch. 415. From its mouth to Hayes Run. 1868 W. Va. Acts 39. Total Drainage area: 21 sq. mi., minimum: 13.

Elk River — From its mouth to Fork Lick (Webster Springs, W.Va.). Chap. 212, VA. ACTS (1838). 1821-22 Va. Acts ch. 51. Minimum drainage area (Webster Springs): 241 sq. mi.

Fish Creek (Marshall Co.) — From its mouth to its forks. 1828-29 Va. Acts ch. 84. Total Drainage area: 251 sq. mi., minimum: 142.

Fishing Creek (Wetzel Co.) — From the mouth up the Main (North) Fork to "Jeremiah H. Kings mills" (Kingstown, W.Va.) and the South Fork from "Hays Mills" (Jacksonburg, W.Va.) upstream to "Aiden Ice's Mills" (site not located). 1862-63 Va. Restored Gov't. Acts ch. 37. 1863-64 W. Va. Acts 91. Total drainage area: 218 sq. mi.; minimum for Main (North) Fork: 26.

Gauley River — From its mouth upstream to Williams River and possibly above. 1872 W. Va. Acts 181, § 15. Total drainage area: 1421 sq. mi., at Williams River: 78.

Great Cacapon River and North River - Both rivers a public highway to the "highest points to which navigation can be conveniently extended." 1814-15 Va. Acts ch. 51. Total drainage areas, Cacapon: 680 sq. mi., North River: 206.

Great Kanawha River — From its mouth to the Kanawha Falls. 1813-14 Va. Acts ch. 36, § 9.

Greenbrier River — From its mouth to Sitlington's Creek. 1838 Va. Acts ch. 209. Extended upstream to "the forks thereof near the line of the Staunton and Parkersburg turnpike" (Durbin, W.Va.). 1840 Va. Acts ch. 85. Minimum drainage area (Durbin): 133 sq. mi.

Guyandotte River — From its mouth upstream to Huff Creek (Mallory, W.Va.). 1821-22 Va. Acts ch. 51. Extended upstream to the Wyoming County line (Little Huff Cr. above Justice, WV). 1887 W. Va. Acts 46. Minimum drainage area: 576 sq. mi.

Hominy Creek (Nicholas Co.) — No upstream limit. 1872 W.Va. Acts ch. 181, § 15. Total Drainage area: 104 sq. mi.

Indian Creek (Tyler Co.) — No upstream limit. 1852 Va. Acts ch. 217. Total drainage area: 32 sq. mi.

Little Cacapon River — From its mouth upstream to the "intersection with Springfield Road" (Higginsville). 1832-33 Va. Acts ch. 99. Total drainage

area: 109 sq. mi.; minimum: 68.

Little Coal River — From its mouth up to confluence of West (Pond) and Spruce Forks and then up Spruce Fork to Hewett's Creek. 1834-35 Va. Acts ch. 95. Minimum drainage area: 85 sq. mi.

Little Kanawha River — Prohibits "any obstruction whatsoever to the navigation" from the mouth upstream to Bulltown (inundated by Burnsville Lake). 1800-01 Va. Acts ch. 7. Total drainage area: 2,309 sq. mi., minimum: 133.

Long Drain of Fish Creek (Wetzel Co.) — From its mouth to "Eamshier's Mill" (site not located). 1871 W. Va. Acts 209. Total drainage area: 19 sq. mi.

M'Elroy Fork of Middle Island Creek (Tyler & Doddridge Cos.) — From its "mouth to main forks" (Center Point, W.Va.). 1839 Va. Acts ch. 147. Total drainage area: 106 sq. mi., minimum: 31.

Meathouse Fork of Middle Island Creek (Doddridge Co.) — Between the mouths of Lick Run and "Big Dry Fork" (Dry Fork). 1869 W. Va. Acts 62. Total drainage area: 65 sq. mi., maximum (Lick Run): 54, minimum (Dry Fork): app. 7.

Meadow River — No upstream limit. 1872 W. Va. Acts 181, § 15. Total Drainage area: 366 sq. mi.

Middle Island Creek — From its "mouth to where state road (Clarksburg to Marietta) crosses it, about seventy miles...." (West Union, W.Va.). 1810-11 Va. Acts ch. 36. Total drainage area: 564 sq. mi., minimum: 121.

Mill Creek (Jackson Co.) — From its mouth to the "forks above the Courthouse" (mouth of Tug Fork). 1834 Va. Acts ch. 105. Total drainage area: 234 sq. mi., minimum: 129.

"Monongalia" (Monongahela) River and the West Fork — From the Pennsylvania line and up the West Fork to Jackson's Mill. 1806 Va. Acts ch. 92. Minimum drainage area (Jackson's Mill): 181 sq. mi.

Mud River — Lower section within Cabell County. 1848-49 Va. Acts ch. 204. Extended upstream to the mouth of Big Laurel Creek (Lincoln County). 1875 W. Va. Acts 111. Total drainage area: 359 sq. mi., minimum: 77.

M'Kimms Creek (Tyler Co.) — No upstream limit. 1846-47 Va. Acts ch. 154. Total drainage area: 37 sq. mi.

North Fork & Willey's Fork of Fishing Creek (Wetzel Co.) — From confluence up Willey's Fork to its "forks" and Road (North) Fork upstream to Willey's Run. 1868 W. Va. Acts 86. Willey's Fork total drainage area: 15 sq. mi., minimum: app. 4. North Fork total area: 11, minimum: 4.7.

North River (Hampshire Co.) — From its mouth to the Hardy County line. 1834 Va. Acts ch. 106. Total drainage area: 206 sq. mi., minimum: 58.

Oldtown Creek (Mason Co.) — From its mouth to the "mouth of J.B., a branch of said creek" (site not located). 1853 Va. Acts ch. 525. Total drainage area: 44 sq. mi.

Pocatallico River — From its mouth to "Droddy's Mill" (Walton, W.Va.). 1835-36 Va. Acts ch. 156. Total drainage area: 356 sq. mi., minimum: 53.

Point Pleasant Creek. (Tyler Co.) — From its mouth upstream to Willow Fork. 1848-49 Va. Acts ch. 202. Total drainage area: 61 sq. mi., minimum: 12.

Potts Creek (Monroe Co.) — Section in Allegheny Co., Va. from its mouth upstream to Blue Spring Run. 1847-48 Va. Acts ch. 220.

Reedy Creek (Roane & Wirt Cos.) — From its “mouth to the three forks thereof” (Reedy, W.Va.). 1839 Va. Acts ch. 147. Total drainage area: 134 sq. mi., minimum: 50.

Robinsons Fork of McElroy Creek (Tyler Co.) - From its mouth to Elkhorn Creek. 1857-58 Va. Acts ch. 242. Total drainage area: 15 sq. mi., minimum: appr. 7.

Sancho Creek (Tyler Co.) — From its mouth to “Elmer Riggs Fork” (probably Foster Run). 1848-49 Va. Acts ch. 203. Total drainage area: 22 sq. mi., minimum: 13.

Shenandoah River. 1801-02 Va. Acts ch. 64, § 4.

Simpsons Creek (Harrison Co.) — From its mouth to the “dam of James Fleming” (Flemington, W. Va.). 1838 Va. Acts ch. 211. Total drainage area: 73 sq. mi., minimum: 28.

Sleepy Creek (Morgan Co.) — From its mouth to its forks, then up North Fork to “Mill of William Catlett” (site not located) and up Middle Fork to “Bohrer’s & Dawson’s Mill” (Oakland, W.Va.). 1844-45 Va. Acts ch. 105. Total drainage area: 145 sq. mi.; minimum (Middle Fork) appr. 17.

South Branch of Potomac River — From its mouth upstream to the “north Fork”. 12 Va. Hening’s Stat. 19 (1785). 1799-1800 Va. Acts ch. 42. Minimum drainage area at North Fork: 675 sq. mi.

Spring Creek (Wirt & Roane Cos.) — From its mouth to Spencer, W. Va. 1867 W. Va. Acts 107. Total drainage area: 90 sq. mi., minimum: 37.

Steer Creek (Braxton, Calhoun & Gilmer Cos.) — No upstream limit. 1872 W. Va. Acts 186, § 9. Total drainage area: 185 sq. mi.

Sugar Tree Creek (Sugar Creek) (Tyler Co.) — From its mouth to Rush Fork. 1851-52 Va. Acts ch. 101. Total drainage area: 22 sq. mi., minimum: 6.9.

Ten Mile Creek (Harrison Co.) — From its mouth to Indian Creek (Run). 1832-33 Va. Acts ch. 100. Total drainage area: 125 sq. mi.; minimum: 45.

Tug Fork of Big Sandy River — To the Virginia State line (Wharncliffe, W.Va). 1868 W. Va. Acts 58. Minimum drainage area: 599 sq. mi.

Twenty Mile Creek (Nicholas Co.) — No upstream limit. 1872 W. Va. Acts 181, § 15. Total Drainage area: 87 sq. mi.

Tygart Valley River — From its mouth upstream to “John Neusom’s Mill” (mouth of Newsoms Run, Valley Falls State Park). 1806 Va. Acts ch. 92.

West Fork of Little Kanawha River (Wirt & Calhoun Cos.) — No upstream limit. 1871 W. Va. Acts 219, § 9. Total drainage area: 246 sq. mi.

Williams River — No upstream limit. 1872 W. Va. Acts 181, § 15. Total drainage area: 129 sq. mi.

X. APPENDIX B – VIRGINIA AND WEST VIRGINIA NAVIGATION COMPANIES

Cheat River: “The Preston Navigation and Manufacturing Company”

— Chartered “for the purpose of making Cheat river navigable for boats and rafts from Ice’s ferry (near Morgantown) to the Horseshoe bottom” (above St. George, W.Va.). 1844-1845 Va. Acts ch. 131.

Coal River Navigation Company. — To improve navigation of Coal River from its mouth upstream to the Boone-Fayette County line (below confluence of Marsh and Clear Forks) and the Little Coal River upstream to Madison. 1848-49 Va. Acts ch. 209. Coal River minimum drainage area: 227 sq. mi.; Little Coal River: 269.

Elk River Navigation Company — To improve the navigation by locks and dams or other methods as far upstream as Company may determine. 1857-58 Va. Acts ch. 194.

Gauley River Improvement, Manufacturing, Mining and Lumber Co — 1872 Va. Acts ch. 181.

Great Cape-Capon and North River Company — To improve navigation of Cacapon and North Rivers “to the highest practicable points of improvement...” 1822-23 Va. Acts ch. 52. Cacapon River maximum drainage area: 680 sq. mi.; North River: 206.

Great Kanawha Company - To improve navigation from its mouth upstream to the “Great Falls”. 1813-14 Va. Acts ch. 36, § 1-2.

Guyandotte Navigation Company - Chartered to build a “slackwater” navigation or other improvements from the mouth to Logan Courthouse and as far above as the Company deems practicable. 1848-49 Va. Acts ch. 208. Drainage area at Logan: 939 sq. mi.

Fishing Creek Lumber and Boom Company — 1867 W. Va. Acts 106.

James River and Kanawha Company — 1832 Va. Acts ch. 82.

Little Kanawha Navigation Company - To improve navigation from the mouth to Bulltown (inundated by Burnsville Lake). 1847 Va. Acts ch. 146. Minimum drainage area: 133 sq. mi.

Middle Island Creek Navigation Company — To improve navigation from the mouth upstream within Pleasants and Tyler Counties. 1818-19 Va. Acts ch. 64. 1839 Va. Acts ch. 142. 1872 W. Va. Acts 160. Maximum drainage area: 564 sq. mi., minimum (at Arnold Creek): 169.

Monongalia Navigation Company — To improve navigation of Monongahela (i.e., “Monongalia” circa 1800) River from the Pennsylvania state line upstream to the mouth of Stonecoal Creek on the West Fork (Weston, W.Va.). 1816-1817 Va. Acts ch. 50; 1820-21 Va. Acts ch. 57. Minimum drainage area: 174 sq. mi.

New River Navigation Company — Improving a “sluice navigation” from the “depot on the Chesapeake and Ohio Railroad (Hinton) to the Virginia state line.” 1872 W. Va. Acts 132. 1856-57 Va. Acts ch. 148.

New Shenandoah Company — To improve navigation on the entire West

Virginia section and upstream. 1813-14 Va. Acts ch. 37.

North Branch Lumber and Boom Company — No upstream limits. 1867 Va. Acts ch. 22.

Opaquan Creek Navigation Company — To improve navigation from its mouth upstream to Tuscarora Creek and up that stream to as near Martinsburg “as may be deemed expedient.” 1828-29 Va. Acts ch. 80. Total drainage area: 344 sq. mi.; at Tuscarora Run, 284. Tuscarora Run total drainage area: 26.

Potowmack Company — Chartered for “opening, improving and extending” navigation on the Potomac River to the “highest part of North Branch to which navigation can be extended...” 11 Va. Hening’s Stat. 43 (1784). Later authorized to improve the Shenandoah River on entire reach within contemporary West Virginia and upstream. 1801-02 Va. Acts ch. 64.

Potomac Navigation Company — To improve navigation on the North Branch Potomac upstream from the terminus of the Chesapeake & Ohio Canal (Cumberland, Md.). 1847 Va. Acts ch. 147. Maximum drainage area: 622 sq. mi.

South Branch Potomac River Commissioners — To supervise the “improvement of the navigation of the South Branch ... from Hogland’s mill (appr. two mi. above Petersburg, W. Va.) to its junction with the North Branch...” 1836-37 Va. Acts ch. 100. Minimum drainage area (Hogland’s Run): 676 sq. mi.

Tug Fork of Big Sandy River: “The Virginia and Kentucky Navigation Company” — Authorized to improve Big Sandy River to the forks at Louisa, Ky. and then up Tug Fork to Pigeon Creek. 1853-54 Va. Acts ch. 96. 1857-58 Va. Acts ch. 197. Minimum drainage area (Pigeon Creek): 1039 sq. mi.

Twelve Pole River Navigation Company — To improve navigation from the mouth upstream “to a point at or near Wayne Courthouse.” 1852-53 Va. Acts ch. 201. Total drainage area: 442 sq. mi., minimum: 301.

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